DOCUMENT RESUME

ED 291 946 CE 049 826

AUTHOR	Oliveira, Victor J.; Cox, E. Jane
TITLE	The Agricultural Work Force of 1985. A Statistical Profile. Agricultural Economic Report 582.
INSTITUTION	Economic Research Service (DOA), Washington, DC. Agriculture and Rural Economics Div.
PUB DATE	Mar 88
NOTE	41p.
AVAILABLE FROM	Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.
PUB TYPE	Reports - Research/Technical (143) -- Statistical Data (110)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Adults; *Agricultural Laborers; *Employment Patterns; Employment Statistics; *Farmers; *Farm Labor; *Farm Occupations

ABSTRACT

This report examines the demographic and employment characteristics, geographic distribution, and earnings of the agricultural work force in the United States as of 1985. Data are from the Agricultural Work Force Supplement to the December 1985 Current Population Survey. The three components of the agricultural work force--hired farmworkers, farm operators, and unpaid farmworkers--are examined separately. A comparison of the findings from each of the three work force components follows the analytical results. Additional statistical tables, information on the source and reliability of the survey estimates, and the definitions of key terms used in this report are in the appendixes. Some of the findings of the survey are as follows: (1) more than 8 million people 14 years of age and older were employed on U.S. farms at some time during 1985, including 2.5 million who did hired farmwork, 2.9 million who operated a farm, and 3.8 million who did unpaid farmwork; (2) more than 1 million workers participated in more than one of these activities; (3) the agricultural work force was predominantly male; (4) nonfarm work was an important sources of earnings for all three agricultural work force groups. (Author/KC)

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The Agricultural Work Force of 1985: A Statistical Profile, by Victor J. Oliveira and E. Jane Cox. Agriculture and Rural Economy Division, Economic Research Service, U.S. Department of Agriculture. Agricultural Economic Report No. 582.

Abstract

Over 8 million people 14 years of age and older were employed on U.S. farms at some time during 1985, including 2.5 million who did hired farmwork, 2.9 million who operated a farm, and 3.8 million who did unpaid farmwork. Over 1 million workers participated in more than one of these activities. The agricultural work force was predominantly male. Nonfarmwork was an important source of earnings for all three agricultural work force groups. This report presents findings of the 1985 Agricultural Work Force Survey.

Keywords: Agricultural work force, hired farmworker, farm operator, unpaid farmworker, racial/ethnic group, migrant farmworker, nonfarmwork

Acknowledgments

The authors thank Leslie Whitener and Susan Pollack for sharing their experiences from studies of the hired farm working force, Steven Logan of the Bureau of the Census, U.S. Department of Commerce, for helping to prepare data, and Wanda Petty and Sharon Davis for typing this report.

Washington, DC 20005-4788 March 1988

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Summary

Over 8 million people 14 years of age and older were employed on U.S. farms at some time during 1985, according to the Agricultural Work Force Survey of 1985, including 2.5 million persons who did hired farmwork, almost 2.9 million persons who operated a farm, and about 3.8 million persons who did unpaid farmwork. Unpaid workers are persons, other than farm operators, who do farmwork without receiving cash wages or salary, or receive only a "token" cash allowance, or do farmwork for room and board or payment-in-kind. Over 1 million workers performed more than one of these three functions.

Almost 24 percent of hired farmworkers were Hispanic or black and other, compared with less than 5 percent of either the farm operators or unpaid farmworkers.

Whether workers considered agriculture their primary employment differed among the three groups. Only about 6 percent of the unpaid farmworkers cited unpaid farmwork as their primary employment during 1985, while 29 percent of the hired farmworkers cited hired farmwork and 42 percent of the farm operators cited operating a farm as their primary employment.

A large percentage of all agricultural labor force workers did nonfarmwork. Over 45 percent of both the hired farmworkers and farm operators and 69 percent of the unpaid farmworkers did nonfarmwork in 1985. Farm operators who had nonfarm jobs averaged $10,722 in 1985 in nonfarm earnings, unpaid farmworkers averaged $10,052 from nonfarm jobs, and hired farmworkers averaged only $5,569 from nonfarm jobs. Hired farmworkers earned about $40 a day from nonfarm jobs, while farm operators and unpaid farmworkers earned about $50 per day from nonfarm jobs.

Hired farmworkers had the lowest levels of education. Half of the hired farmworkers had not completed high school, while over three-quarters of the farm operators and unpaid farmworkers were high school graduates.

Hired Farmworkers

The number of hired farmworkers has not changed much since 1969. Most of the hired farmworkers in 1985 were white, young, male, and had little education, but characteristics varied across racial/ethnic groups and regions. Migrant farmworkers made up 6 percent of the total hired farm work force.

Hired farmworkers averaged 107 days of hired farmwork. Less than one-third of all hired farmworkers were regular or year-round workers working 150 or more days, but they accounted for over three-quarters of the total worker-days of hired farmwork. Hired farmworkers earned an average of $3,247 from hired farmwork and $2,579 from nonfarmwork. Almost 40 percent of all hired farmworkers, the majority of whom were students, were not in the labor force most of the year.

Farm Operators

The 2.9 million persons who operated a farm in 1985 lived in about 2.3 million households. Farm operators were predominantly white, male, and older than hired farmworkers and unpaid farmworkers. Most of the female farm operators were married to other farm operators.

Farm operators averaged 236 days operating a farm in 1985. Almost one-half of all farm operators cited either grain or beef cattle as the product contributing most to the gross value of sales on the farm they operated.

Unpaid Farmworkers

Most unpaid farmworkers were white and male. Unpaid farmworkers averaged 56 days of unpaid farmwork in 1985. Over half worked fewer than 15 days at unpaid farmwork. While only 36 percent of all unpaid farmworkers lived in a household with a farm operator present, they accounted for 64 percent of the total days worked by unpaid farmworkers. Fifty-one percent of unpaid farmworkers reported nonfarm work as their primary employment status during the year.

The Agricultural Work Force of 1985

A Statistical Profile

Victor J. Oliveira and E. Jane Cox*

Introduction

Over 8 million people 14 years of age and older were employed on U.S. farms at some time during 1985. That number includes 2.5 million persons who did hired farmwork, almost 2.9 million persons who operated a farm, and about 3.8 million persons who did unpaid farmwork (table 1). Over 1 million workers, or 13 percent of the agricultural work force, participated in more than one of these three agricultural activities.

Data in this report are from the Agricultural Work Force Supplement to the December 1985 Current Population Survey (CPS). This supplement was conducted for the Economic Research Service by the Bureau of the Census, U.S. Department of Commerce. Prior to 1985, data were collected for hired farmworkers, but not for farm operators and unpaid farmworkers, by the Hired Farm Working Force Survey.[1] The Hired Farm Working Force Survey was expanded in 1985 to include farm operators and unpaid farmworkers[2] as well as hired farmworkers and was renamed the Agricultural Work Force Survey. Thus, this report estimates the total number of persons employed on U.S. farms at some time during 1985.

Information on agricultural labor is necessary for evaluating the performance of U.S. agriculture, monitoring changing farm labor patterns, and determining the economic well-being of farmworkers (*2, 7*).[3] In addition to number of workers, this report presents data on the demographic, economic, and regional characteristics of the agricultural work force.

The survey sample included households in all 50 States and the District of Columbia, but excluded Puerto Rico and other U.S. territories and possessions. In December 1985, approximately 57,000 households were interviewed, about 4,000 of which contained persons in the agricultural work force. Information obtained from this sample of households was expanded to provide estimate of the total agricultural work force.

This report examines the demographic and employment characteristics, geographic distribution, and earnings of the agricultural work force.[4] The three components of the agricultural work force—hired farmworkers, farm operators, and unpaid farmworkers—are examined separately. A comparison of the findings from each of the three work force components follows the analytical results. Additional statistical tables, information on the source and reliability of the survey estimates, and the definitions of key terms used in this report are in the appendices.

Hired Farmworkers

About 2.5 million people earned cash wages or salary from farmwork in 1985. The number of hired farmworkers has not changed much since 1969. Most of the hired farmworkers were white, young, male, and had

* The authors are economists with the Agriculture and Rural Economy Division.

[1] The Hired Farm Working Force Survey was conducted annually from 1945 to 1977, and biennially since.

[2] Unpaid farmworkers are persons, other than farm operators, who do farmwork without receiving cash wages or salary, or receive only a "token" cash allowance, or do farmwork for room and board or payment-in-kind.

[3] Italicized numbers in parentheses refer to items in the References section.

[4] The CPS is a probability sample survey, and standard errors can be derived from the estimates. Comparisons in the text are based on data significant at the 95-percent confidence level or higher.

Table 1—The agricultural work force of 1985[1]

Characteristic	Number
	Thousands
Agricultural work force	8,061[2]
Total hired farmworkers	2,522
Did hired farmwork only	1,933
Operated a farm	148
Did unpaid farmwork	364
Operated a farm and did unpaid farmwork	77
Total farm operators	2,889
Operated farm only	2,203
Did hired farmwork	148
Did unpaid farmwork	461
Did hired and unpaid farmwork	77
Total unpaid farmworkers	3,777
Did unpaid farmwork only	2,875
Did hired farmwork	364
Operated a farm	461
Did hired farmwork and operated a farm	77

[1] Data are rounded to nearest thousand.

[2] Total number of individuals in the agricultural work force adjusted for double counting between worker categories.

low levels of education. Hispanics made up 13 percent of the hired farm work force, and blacks and others accounted for 11 percent. As a group, hired farmworkers averaged 107 days of hired farmwork and earned an average of $3,247 from hired farmwork. Only 29 percent of all hired farmworkers reported their primary employment status during the year as hired farmwork. Migrant farmworkers accounted for 6 percent of all hired farmworkers. This section outlines the demographic, geographic, and employment and earnings characteristics of hired farmworkers.

Hired farmworkers are persons 14 years of age and older who did farmwork for cash wages or salary at any time during the year. Of the 2.5 million persons who did hired farmwork, 589,000 also operated a farm or did unpaid farmwork (table 1). The number of hired farmworkers fell from 4.3 million in 1950 to under 2.5 million in 1970 (table 2). This decline was largely due to farm mechanization, other laborsaving technological innovations, and farm enlargement (*3*). As increases in mechanization and technological innovations in the farm sector have leveled off, the number of hired farmworkers has remained relatively stable at about 2.5 to 2.8 million.

While the hired farm work force data in table 2 probably reflect the true trend in the hired work force, they are not complete estimates of the total number of hired farmworkers (*1*). Foreign as well as domestic workers do hired farmwork in the United States. The Agricultural Work Force Survey provides good coverage of domestic farmworkers, but it probably enumerates few illegal aliens, either because they have returned home before the survey is conducted in the month of December, or because they avoid enumerators due to their illegal status. Good estimates of the number of illegal aliens employed in agriculture in 1985 do not exist. Also, foreign nationals who legally did hired farmwork in this country in 1985 under the H–2 temporary foreign agricultural worker program and returned home before the survey was conducted were not included in the count of hired farmworkers.[5] In 1985, about 21,000 U.S. farm jobs were certified for foreign workers by the U.S. Department of Labor under the H–2 program.

Demographic Characteristics

The 1985 hired farm work force as a whole was predominantly young, white, male, and had low levels of education. However, this work force is not a homogeneous group as worker characteristics varied across racial/ethnic groups.

[5] The H–2 program allows U.S. employers to hire foreign agricultural workers temporarily when qualified U.S. workers are not available at the time and place needed and the employment of foreign workers will not adversely affect the wages and working conditions of U.S. workers as determined by the U.S. Department of Labor.

Racial/Ethnic Group, Sex, and Age. Of the 2.5 million hired farmworkers, 76 percent were white, 13 percent were Hispanic, and 11 percent belonged to black or other racial/ethnic groups (table 3). Seventy-nine percent of the hired farm work force were male. Over half of all hired farmworkers were under 25 years of age, and three-quarters were under 35 years of age. The median age for all hired farmworkers was 24 years. The large proportion of youths among hired farmworkers reflects that much of hired farmwork, unlike some occupations, is low skill and requires little work experience.

The distribution of hired farmworkers by age differed significantly by racial/ethnic group (table 4). Twenty-five percent of all white farmworkers were under 18 years of age, compared with only 12 percent of the blacks and others and 10 percent of the Hispanics. The median age

Table 2—Number of hired farmworkers[1]

Year	Hired farmworkers
	Thousands
1950	4,342
1951	3,274
1952	2,980
1953	—
1954	3,009
1955	—
1956	3,575
1957	3,962
1958	4,212
1959	3,577
1960	3,693
1961	3,488
1962	3,622
1963	3,597
1964	3,370
1965	3,128
1966	2,763
1967	3,078
1968	2,919
1969	2,571
1970	2,488
1971	2,550
1972	2,809
1973	2,671
1974	2,737
1975	2,638
1976	2,767
1977	2,730
1978	—
1979	2,652
1980	—
1981	2,492
1982	—
1983	2,595
1984	—
1985	2,522

— = No survey conducted.
[1] Data are rounded to nearest thousand.

of white hired farmworkers was 23 years compared with 28 years for Hispanics and 29 years for blacks and others. The dramatic decrease in the proportion of white workers after age 34 suggests that whites are more likely to use farmwork as an entry level job into the labor force, or as a supplemental job (*3*). On the other hand, the large proportion of minority farmworkers in the prime working ages (25–54) suggests that farmwork is not an entry level or a supplementary job for many of these workers, but a career.

Education. Hired farmworkers had low levels of education as measured by years of schooling completed. Half of all hired farmworkers had not completed high school, and only 17 percent had any college education (table 5). Whites generally achieved higher levels of education than did minorities; 58 percent of whites completed high school compared with 33 percent of blacks and others and only 17 percent of Hispanics. The low educational levels of minority farmworkers and their limited nonfarm job alternatives help explain their greater likelihood of being employed in agriculture during their prime working years.

The hired farm work force included some people who were still in school. This was especially true of young whites who made up a large proportion of all white farmworkers. The educational levels for white farmworkers age 25 and older (an age when most schooling is completed) were significantly higher than those of white farmworkers age 14–24. Almost 75 percent of the white farmworkers age 25 and older completed high school, compared with only 44 percent of white farmworkers age 14–24. The educational levels of minority farmworkers age 25 and older did not differ significantly from those of minority farmworkers age 14–24.

Table 3—Demographic characteristics of hired farmworkers, 1985

Characteristic	Hired farmworkers	
	Thousands	*Percent*
All hired farmworkers	2,522	100.0
Racial/ethnic group:[1]		
White	1,922	76.2
Hispanic	326	12.9
Black and other	274	10.9
Sex:		
Male	1,980	78.5
Female	542	21.5
Age (years):		
14–17	552	21.9
18–24	739	29.3
25–34	601	23.8
35–44	260	10.3
45–54	185	7.3
55–64	110	4.4
65 and older	75	3.0
	Years	
Median age	24	

[1] The population is divided into the three mutually exclusive groups specified. See appendix III for further explanation.

Table 4—Age distribution of hired farmworkers by racial/ethnic group, 1985

Age	White	Hispanic	Black and other
	Thousands		
All hired farmworkers	1,922	326	274
Age (years):	*Percent*		
14–17	25.4	9.5	11.8
18–24	29.7	30.4	25.7
25–34	22.7	27.8	26.9
35–44	9.5	13.4	12.6
45–54	6.0	13.1	10.0
55–64	3.7	4.8	8.2
65 and older	3.0	1.0	4.8
Total	100.0	100.0	100.0
	Years		
Median age	23	28	29

Regional Location

The number of hired farmworkers varied considerably by the 10 farm production regions shown in figure 1. This variation reflects differences in size of the farm sector among regions and differences in the labor requirements of the mix of commodities produced. Farm production

Table 5—Years of education completed by all hired farmworkers and hired farmworkers 25 years of age and older, by racial/ethnic group, 1985[1]

Education	Total	White	Hispanic	Black and other
	Thousands			
All hired farmworkers	2,522	1,922	326	274
Years of education completed:	*Percent*			
0–4	4.4	1.1	24.9	3.2
5–8	17.3	13.3	36.6	22.4
9–11	28.4	27.7	21.4	41.5
12	33.4	37.4	14.2	27.6
13 and over	16.5	20.4	2.9	5.3
Total	100.0	100.0	100.0	100.0
Workers 25 years and older	*Thousands*			
	1,231	863	196	171
Years of education completed:	*Percent*			
0–4	7.8	2.4	34.4	4.4
5–8	17.3	9.8	40.7	28.5
9–11	15.3	13.1	10.4	32.1
12	40.4	49.0	12.8	28.8
13 and over	19.2	25.8	1.8	6.1
Total	100.0	100.0	100.0	100.0

[1] Numbers and percentages may not add to totals due to rounding.

regions differ in soil, slope of land, climate, type of crops and commodities produced, and in the labor required to produce the commodities. The Corn Belt, Pacific, and Appalachia regions contained 47 percent of the hired farmworkers at the time of the survey. In contrast, the Delta States, Southeast, and Northern Plains regions contained only 16 percent of the Nation's hired farmworkers.

The racial/ethnic composition of the hired farm work force differed by farm production region (table 6). Whites accounted for the majority of farmworkers in all the farm production regions except the Southeast and Southern Plains. Hispanics made up 44 percent of the farmworkers in the Southern Plains, and 34 percent in the Pacific. Over one-third of the farmworkers in the Southeast and Delta States were blacks or others.[6]

Employment and Earnings Characteristics

The earnings of hired farmworkers are among the lowest of all U.S. occupational groups, although differences among farmworker groups are significant. Over two-thirds of the farmworkers worked fewer than 150 days at hired farmwork in 1985, and many also did nonfarmwork.

[6] See appendix I for more information on the demographic and employment characteristics of hired farmworkers by farm production regions.

Primary Employment Status During Year. Most persons who did hired farmwork in 1985 did not consider it their primary labor force activity; that is, the majority of these workers were primarily engaged in some other activity during the year. Only 29 percent of the hired farmworkers reported their primary employment status as hired farmwork; 28 percent were students and 22 percent were nonfarm workers (table 7).[7]

The primary employment status differed by racial/ethnic group. Hispanics were more likely than whites and blacks and others to report that hired farmwork was their primary employment. Almost 57 percent of all Hispanic hired farmworkers were primarily hired farmworkers. This compares with only 35 percent of all black and other hired farmworkers and 23 percent of all white hired farmworkers. On the other hand, whites were more likely than Hispanics to be primarily nonfarmworkers. One-quarter of the whites reported nonfarmwork as their primary activity compared with only 8 percent of the Hispanics. Whites were also more likely than both Hispanics and blacks and others to be primarily students. Attending school was the primary activity of almost 33

[7] Primary employment status data reflect responses to a question concerning the major activity of respondents during the year. Many respondents did hired farmwork sometime during 1985 while primarily engaged in some other activity. See appendix III for more detailed information on primary employment status during year.

Fig. 1—Number and percentage distribution of hired farmworkers, by farm production region, 1985

*Includes Alaska and Hawaii.

percent of the whites, but only 20 percent of the blacks and others, and 10 percent of the Hispanics.

Days Worked. Much hired farmwork is characterized by unstable and short-term employment largely due to the seasonal nature of agriculture. Farmwork has periods of peak labor use (fig. 2), such as during the harvesting of perishable fruits and vegetables. Only 34 percent of all hired farmworkers were employed in February compared with 67 percent in July. Seasonality of employment is even more extreme for younger workers who may be in school much of the year. Only 20 percent of workers age 14–17 years were employed from January to May, over 70 percent in July, and less than 20 percent again in November and December. There was less monthly variation in the employment levels of workers 25 years and older. But, even in this group, the percentage employed in January was 18 percentage points below the peak employment level in July.

Table 6—Geographic distribution of hired farmworkers, by racial/ethnic group, 1985[1]

Farm production region	Total	Racial/ethnic group		
		White	Hispanic	Black and other
	Thousands	*Percent*		
Northeast	265	93.8	2.3	3.9
Lake States	269	97.1	2.5	.4
Corn Belt	428	98.2	.8	1.0
Northern Plains	154	96.8	.6	2.6
Appalachia	355	70.9	.4	28.7
Southeast	164	44.1	18.7	37.2
Delta States	90	60.9	0	39.1
Southern Plains	217	49.6	44.3	6.1
Mountain	179	74.0	25.4	.7
Pacific	401	55.8	33.8	10.4
United States	2,522	76.2	12.9	10.9

[1] Numbers and percentages may not add to totals due to rounding.

Although hired farmworkers as a group averaged 107 days of hired farmwork in 1985, the number of days worked by farmworkers varied considerably. Slightly less than one-third of all farmworkers were regular or year-round workers, working 150 days or more at hired farmwork (table 8). Thirty-seven percent of all hired farmworkers were casual workers, working fewer than 25 days at hired farmwork during the year. Seasonal workers worked 25–149 days at hired farmwork and made up 31 percent of the hired farm work force (fig. 3). While regular and year-round workers made up less than one-third of the hired farm work force, they accounted for over three-fourths of the 269 million total worker days of hired farmwork. Conversely, casual workers made up 37 percent of the work force but accounted for only 3 percent of days worked.

Because of the seasonality of agricultural employment and relatively low pay for most farmwork, many farmworkers work at nonfarm jobs to increase their income. In 1985, 46 percent of all hired farmworkers did some nonfarm work during the year (table 8). However, hired farmworkers who did some nonfarm work worked fewer days at hired farmwork than farmworkers who did only hired farmwork. Almost half of those who did farmwork only were regular and year-round workers, compared with only 12 percent of those who did nonfarmwork.

The number of days spent at hired farmwork varied by other farmworker characteristics as well (table 8). The findings indicate that:

- Hispanics were more likely to be regular and year-round workers than were whites and blacks and others. Almost 54 percent of the Hispanics worked 150 days or more compared with 27 percent of the whites and about 33 percent of the blacks and others.

Table 7—Primary employment status during year of hired farmworkers by racial/ethnic group, 1985[1]

Primary employment status during year	Total hired farmworkers		Racial/ethnic group		
			White	Hispanic	Black and other
	Thousands	*Percent*			
All hired farmworkers	2,522	100.0	100.0	100.0	100.0
In labor force	1,531	60.7	57.8	75.8	63.9
Hired farmwork	723	28.7	23.0	56.9	35.1
Operated farm	127	5.0	6.0	1.9	2.2
Unpaid farmwork	21	.8	1.1	0	0
Nonfarmwork	560	22.2	25.1	7.8	19.1
Unemployed	100	4.0	2.6	9.2	7.5
Not in labor force	991	39.3	42.3	24.2	36.1
Keeping house	159	6.3	5.7	9.2	7.1
Attending school	718	28.5	32.9	9.8	19.9
Other	114	4.5	3.8	5.2	9.1

[1] Numbers and percentages may not add to totals due to rounding.

Fig. 2—Proportion of hired farmworkers employed in each month by age, 1985

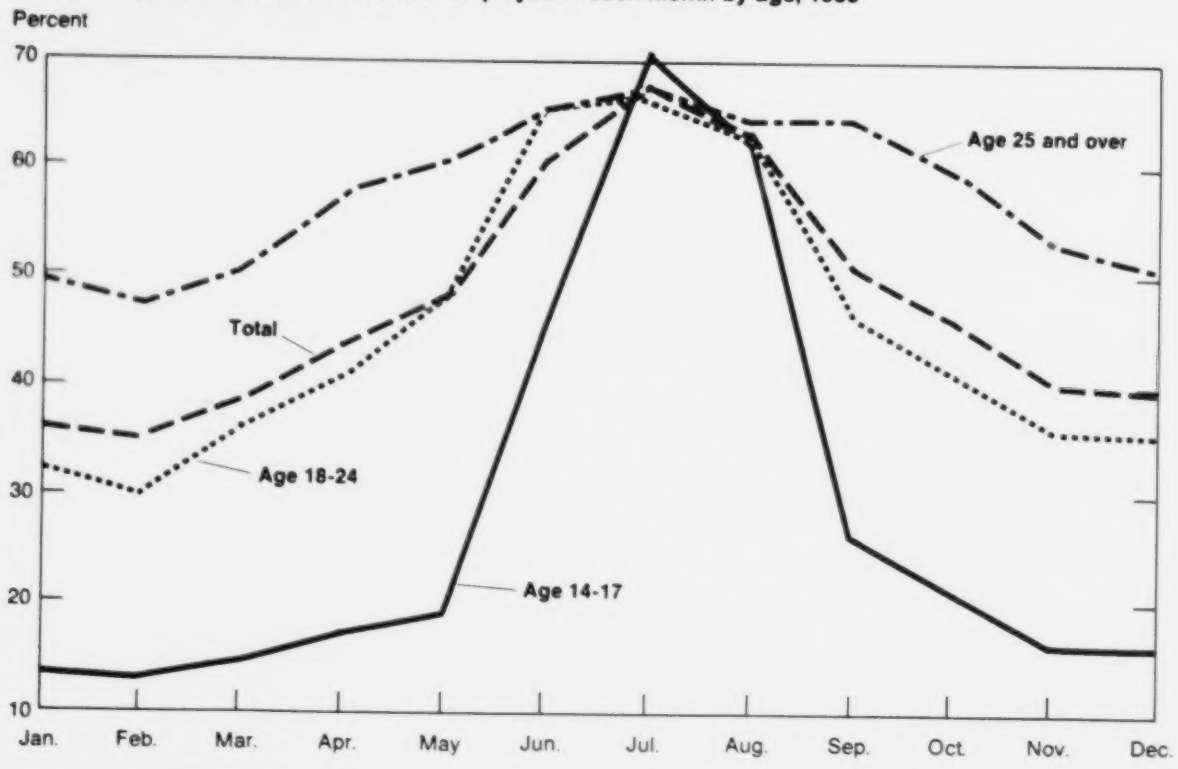
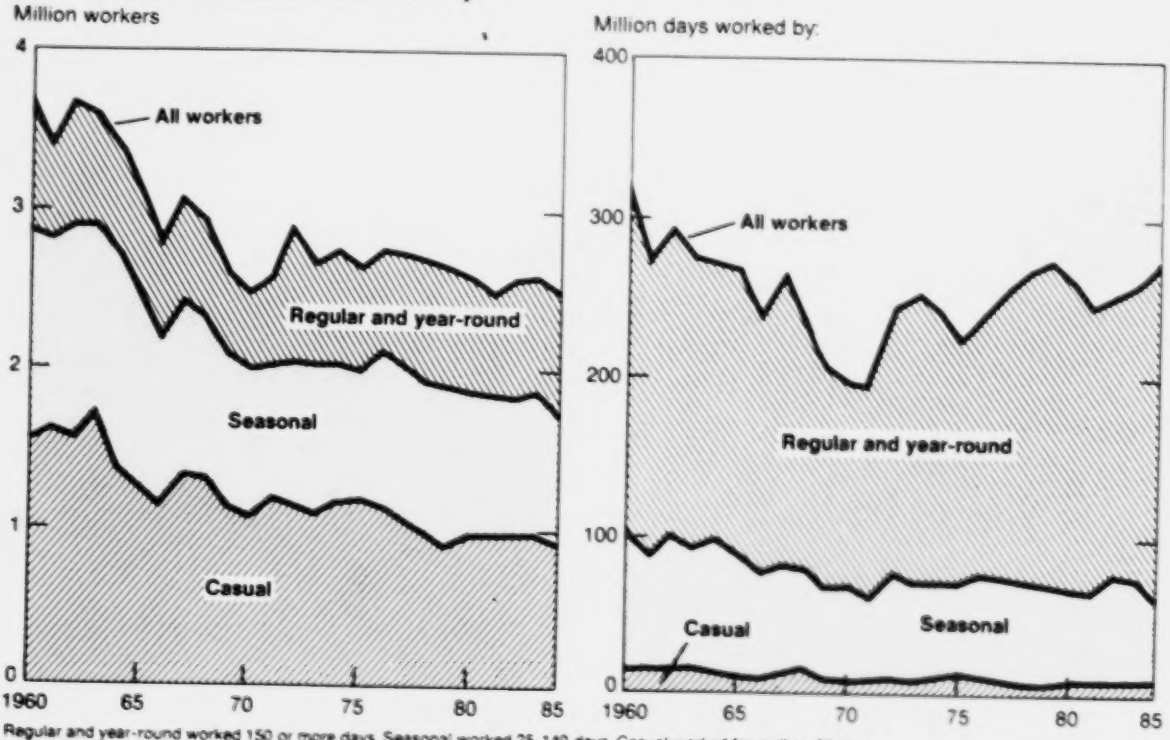


Fig. 3—Hired farmworkers and worker-days



Regular and year-round worked 150 or more days. Seasonal worked 25-149 days. Casual worked fewer than 25 days.
Data for 1978, 1980, 1982, and 1984 interpolated--actual data not available.

- Males were more likely to be year-round workers than were females. Twenty percent of the males worked 250 or more days compared with only 8 percent of the females. Conversely, 47 percent of the females were casual workers compared with 35 percent of males.

- Younger workers worked fewer days than older workers. Almost 58 percent of the hired farmworkers age 14–17 were casual workers while only 8 percent were regular or year-round workers. Over half of the workers age 45–54 and 55–65 were regular or year-round workers.

- Slightly over 85 percent of the hired farmworkers who reported hired farmwork as their primary employment status during the year worked 150 or more days in 1985. In comparison, only 7 percent of those who were primarily students were regular or year-round farmworkers.

Table 8—Demographic characteristics of hired farmworkers, by days of farmwork, 1985[1]

Characteristic	Total	Days of farmwork				
		Casual	Seasonal		Regular and year-round	
		Fewer than 25	25–74	75–149	150–249	250 and over
	Thousands					
All hired farmworkers	2,522	943	509	280	344	445
Racial/ethnic group:						
White	1,922	791	395	213	179	344
Hispanic	326	55	62	33	104	71
Black and other	274	97	52	35	60	30
Sex:						
Male	1,980	689	401	220	272	399
Female	542	254	108	60	73	46
Age (years):						
14–17	552	318	146	42	19	26
18–24	739	267	174	91	94	114
25–34	601	192	106	70	106	127
35–44	260	81	38	28	38	75
45–54	185	43	13	24	47	57
55–64	110	20	17	16	22	34
65 and older	75	21	16	8	17	12
Nonfarmwork:						
Did nonfarmwork	1,168	596	280	151	82	60
Did farmwork only	1,354	347	229	129	262	386
Primary employment status:						
In labor force	1,531	426	218	179	294	414
Hired farmwork	723	11	18	68	258	368
Operated farm	127	42	18	23	10	33
Unpaid farmwork	21	11	2	4	4	0
Nonfarmwork	560	324	133	75	15	13
Unemployed	100	38	47	9	7	0
Not in labor force	991	517	290	102	51	31
Keeping house	159	88	36	15	16	4
Attending school	718	383	214	72	23	26
Other	114	46	40	15	12	1
Agricultural activity:[2]						
Grains	590	243	135	76	60	76
Cotton	86	30	25	8	4	20
Tobacco	208	118	53	12	16	9
Other field crops	365	213	62	39	29	22
Vegetables or melons	196	65	55	21	34	22
Fruits or tree nuts	261	74	47	29	87	25
Horticulture specialty	130	43	22	15	29	20
Beef cattle	163	36	39	26	16	46
Dairy	225	37	30	21	21	116
Other livestock	203	45	29	19	39	71
Other	94	40	13	14	9	19

[1] Numbers and percentages may not add to totals due to rounding.
[2] Refers to the crop or livestock worked with the most on the longest farm job.

- Workers whose longest farm job was in livestock generally worked more days of farmwork than workers whose longest job was in crops. For example, almost 61 percent of the workers whose longest farm job was in dairy production and 54 percent of the workers in other livestock production worked 150 or more days, compared with about 12 percent in tobacco production and 14 percent in other field crops.

Earnings. The average annual earnings of all hired farmworkers was $5,826 in 1985, of which $3,247, or 56 percent, was from hired farmwork (table 9). The average nonagricultural private sector production worker received about $15,660, over 2.5 times the earnings of hired farmworkers in 1985, by comparison (6). Earnings among farmworker groups differed significantly. White farmworkers had higher average annual earnings ($6,015) than blacks and others ($4,812). (Average annual earnings of whites and Hispanics were not significantly different at the 95-percent confidence level.) Hispanics, who had average total annual earnings of $5,563, received a larger proportion of their earnings from farmwork than did whites and blacks and others. Farmwork accounted for 86 percent of the total earnings for Hispanic hired farmworkers, 62 percent of the total earnings of blacks and others, and only 50 percent of the total earnings of whites. Among those who did farmwork only, Hispanics had the highest earnings ($5,804), then whites ($4,572), and blacks and others ($3,906).

Farmworkers who did both hired farmwork and nonfarmwork had significantly greater annual earnings ($7,129) than did those workers who did farmwork only ($4,702). The average farm earnings of those who did both hired farmwork and nonfarmwork was only $1,560, or about 22 percent of their total earnings.

Farmworkers whose primary employment status during the year was nonfarmwork averaged $10,466, of which $1,082 was farm earnings. Those who primarily did hired farmwork averaged $8,395, of which $8,033 was farm earnings. Students earned only $1,272, with $731 coming from farmwork.

The total earnings of workers also varied by the number of days spent doing hired farmwork. Farmworkers who worked fewer than 25 days at hired farmwork, and those who worked 25–74 days received average earnings of slightly more than $4,000, most of which was from nonfarm earnings (fig. 4). As days of farmwork increased, total earnings and the proportion derived from farmwork increased. Farmworkers working 250 days or more at hired farmwork had the highest total earnings, $10,474, of which $9,917 were farm earnings.

Migrant Farmworkers

A migrant farmworker is defined as someone who temporarily crosses State or county boundaries and stays overnight to do hired farmwork, or one who has no usual

Table 9—Demographic characteristics of hired farmworkers, by average annual earnings, 1985[1]

Characteristic	All hired farmworkers			Those who did hired farmwork only		Those who did both hired farmwork and nonfarmwork		
	Workers	Total annual earnings	Annual farm earnings	Workers	Annual farm earnings	Workers	Total annual earnings	Annual farm earnings
	Thousands	*Dollars*		*Thousands*	*Dollars*	*Thousands*	*Dollars*	
All hired farmworkers	2,522	5,826	3,247	1,354	4,702	1,168	7,129	1,560
Racial/ethnic group:								
White	1,922	6,015	3,018	920	4,572	1,002	7,340	1,592
Hispanic	326	5,563	4,795	245	5,804	81	4,836	1,749
Black and other	274	4,812	3,008	189	3,906	85	6,833	1,003
Primary employment status during year:								
In labor force	1,531	8,585	4,743	756	7,629	774	9,519	1,923
Hired farmwork	723	8,395	8,033	616	8,469	108	7,974	5,541
Operated farm	127	7,048	5,331	82	5,416	45	10,011	5,177
Unpaid farmwork	21	[2]	[2]	3	[2]	17	[2]	[2]
Nonfarmwork	560	10,466	1,082	0	0	560	10,466	1,083
Unemployed	100	2,219	1,337	55	1,877	45	2,634	681
Not in labor force	991	1,565	937	597	996	394	2,427	846
Keeping house	159	1,938	1,450	101	1,452	57	2,799	1,446
Attending school	718	1,272	731	418	779	300	1,958	664
Other	114	2,883	1,516	78	1,563	36	5,757	1,413

[1] Numbers may not add to totals due to rounding.
[2] Averages not shown when base is fewer than 50,000 workers.

place of residence and does hired farmwork in two or more counties during the year.

The supply of migrant farm labor is an important factor in U.S. farm production. Migrants supplement local labor during peak use seasons when the demand for agricultural workers frequently exceeds the supply of farmworkers living in the local area (*3*). Due to the perishability of many agricultural products and the seasonality of agriculture, migrant workers often provide a crucial source of labor during peak planting and harvesting periods.

The number of reported migrant farmworkers has fluctuated greatly since 1979, suggesting the possibility of an estimation error or nonsampling error associated with survey procedures (table 10). Estimates of migrant workers should be interpreted cautiously because they are based on a relatively small number of cases and the applicable standard errors may not fully reflect the extent of sampling and nonsampling errors associated with the estimates (see app. II). Data on the regional distribution and earnings of migrants are not reported because of low statistical reliability.

Demographic Characteristics. The 159,000 workers reporting migrant farmwork made up 6 percent of the hired farm work force in 1985. The demographic characteristics of migrant farmworkers were similar to those of nonmigrant farmworkers. Both groups were mostly young, white, and male (table 11). The educational level of all migrant farmworkers did not differ significantly from that of all nonmigrants (table 12). There was also no significant difference in educational levels between migrants age 14–24 and migrants age 25 and older.

Table 10—Migrant farmworkers by days of farmwork[1]

Year	Total	Days of farmwork			
		Fewer than 25	25–74	75–149	150 or more
		Thousands			
1960	409	92	122	84	111
1961	395	99	131	80	85
1962	380	92	133	83	73
1963	386	108	89	111	78
1964	386	114	102	88	82
1965	466	165	114	92	94
1966	351	76	114	73	87
1967	276	81	81	56	57
1968	279	103	85	39	52
1969	257	85	84	46	41
1970	196	61	59	31	45
1971	172	55	57	35	24
1972	184	46	55	35	48
1973	203	57	57	37	52
1974	209	68	63	35	43
1975	188	45	74	21	48
1976	213	66	60	53	34
1977	191	39	73	35	44
1978	—	—	—	—	—
1979	217	56	80	33	48
1980	—	—	—	—	—
1981	115	24	37	12	43
1982	—	—	—	—	—
1983	226	36	52	62	78
1984	—	—	—	—	—
1985	159	37	53	25	44

— = No survey conducted.
[1] Numbers are rounded to nearest thousand and may not add to totals.

Employment Characteristics. Migrant and nonmigrant farmworkers had about the same primary employment status and were engaged in the same major agricultural activities in 1985. However, the data suggest that more migrant than nonmigrant farmworkers had nonfarm employment, that is, 64 percent of the migrants compared with only 45 percent of the nonmigrants (table 13). Furthermore, a greater percentage of nonmigrants than migrants worked fewer than 25 days, and worked 250 or more days at hired farmwork in 1985. Migrants worked an average of 95 days at hired farmwork compared with 108 days for nonmigrants.

Farm Operators

Almost 2.9 million people residing in 2.3 million households operated a farm in 1985. This was the first year in which the Agricultural Work Force Survey collected data on farm operators. Estimates of the number of farm operators before 1985 are not available from this survey. Ninety-seven percent of all farm operators were white

Table 11—Demographic characteristics of migrant and nonmigrant farmworkers, 1985[1]

Characteristic	Migrant farmworkers		Nonmigrant farmworkers	
	Thousands	*Percent*	*Thousands*	*Percent*
Total farmworkers	159	100.0	2,363	100.0
Racial/ethnic group:				
White	115	72.4	1,807	76.5
Hispanic	30	19.0	296	12.5
Black and other	14	8.6	260	11.0
Sex:				
Male	117	73.5	1,864	78.9
Female	42	26.5	500	21.1
Age:				
14–17	33	20.6	519	22.0
18–24	61	38.3	679	28.7
25–34	38	24.1	563	23.8
35–44	19	11.7	241	10.2
45–54	3	2.0	182	7.7
55–64	2	1.5	108	4.6
65 and older	3	1.7	72	3.1
	Years			
Median age	22		24	

[1] Numbers and percentages may not add to totals due to rounding.

and 76 percent were male. Most of the female farm operators were married to another farm operator. Over three-quarters of the farm operators had completed high school and one-third had some college education. Almost half of all farm operators cited grain or beef cattle as the product contributing most to the gross value of sales on the farm they operated. Farm operators averaged 236 days operating a farm in 1985. Forty-two percent reported their primary employment status as operating a farm. Almost 48 percent of all farm operators did some nonfarmwork. They averaged 211 days of nonfarmwork and had average nonfarm earnings of $10,722. This section outlines the demographic, geographic, and employment characteristics of farm operators.

Table 12—Years of education completed by migrant and nonmigrant farmworkers, 1985[1]

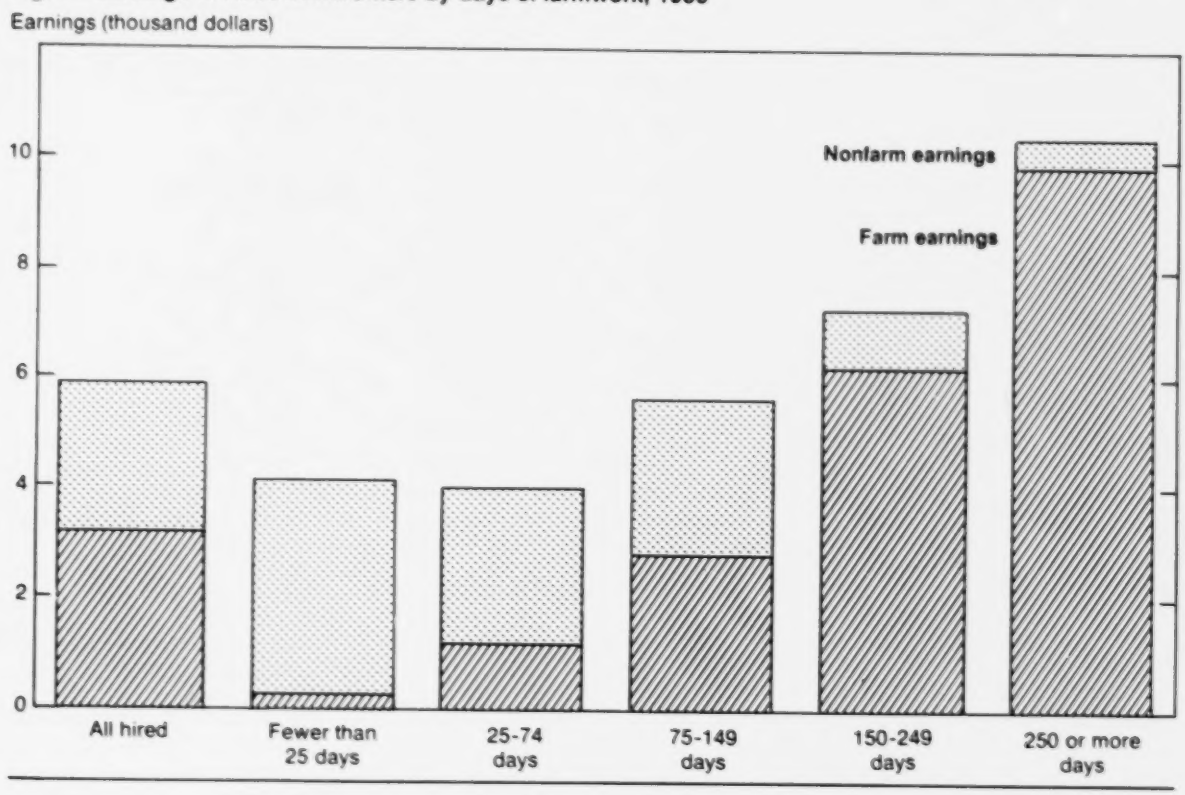
Years of education completed	Migrant farmworkers		Nonmigrant farmworkers	
	Thousands	*Percent*	*Thousands*	*Percent*
All workers	159	100.0	2,363	100.0
0–4	8	5.1	103	4.4
5–8	32	19.9	405	17.1
9–11	39	24.8	677	28.7
12	45	28.2	797	33.7
13 and over	35	22.0	381	16.1
Workers 25 years and older	65	100.0	1,165	100.0
0–4	8	12.3	88	7.5
5–8	9	13.6	204	17.5
9–11	13	20.0	175	15.0
12	19	28.7	478	41.0
13 and over	17	25.4	220	18.9

[1] Numbers and percentages may not add to totals due to rounding.

A farm operator is defined as any person who operated a farm which he or she owned, rented, or leased at anytime during 1985. Two or more people (such as a husband and wife, or partners) could operate one farm, and both would be included as farm operators in this definition. In the Agricultural Work Force Survey, a farm was self-defined by respondents; that is, no formal definition of a farm was given to respondents.

The definition of farm operator used in this report was designed to measure self-employment in agriculture instead of farms as economic entities. Consequently, the definition of a farm operator used in this report differs from the definition of a farm used by the National Agricultural Statistics Service (NASS) and the Census of Agriculture. Their definition of a farm permits only *one* operator to be counted per farm, and farms are defined as places from which $1,000 or more of agricultural products were sold or normally would have been sold during the year. Therefore, the data on number of farm operators in this report differ from the data on number of

Fig. 4—Earnings of hired farmworkers by days of farmwork, 1985



farms reported by others who use the farm and not the operator as the unit of analysis. For example, NASS determined that there were 2,275,000 farms in the United States in 1985 and the Census of Agriculture reported 2,241,000 in 1982, to cite the most recent data available (*4, 5*). These data on number of farms are somewhat less than the number of farm operators reported here (2,889,000). However, the similarity between the data on farm operators in this report and the estimate of farm numbers becomes more apparent when the number of farm operator households is compared with the number of farms (table 14). A farm operator household is a household in which at least one farm operator resided. Data from the 1985 Agricultural Work Force Survey show that about 25 percent of farm operator households had more than one operator. Thus, the number of farm operator households in 1985 (2,263,000) is similar to the number of farms reported by both NASS and the Census of Agriculture.

Table 13—Employment characteristics of migrant and nonmigrant farmworkers, 1985[1]

Characteristic	Migrant farmworkers		Nonmigrant farmworkers	
	Thousands	*Percent*	*Thousands*	*Percent*
Total farmworkers	159	100.0	2,363	100.0
Primary employment status:				
In labor force	93	58.4	1,439	60.9
Hired farmwork	31	19.6	692	29.3
Farm operator	5	3.2	122	5.2
Unpaid farmworker	3	2.0	18	.7
Nonfarmwork	46	28.9	514	21.7
Unemployed	7	4.7	93	3.9
Not in labor force	66	41.6	925	39.1
Keeping house	11	6.6	148	6.3
Attending school	48	30.3	670	28.4
Other	7	4.6	107	4.5
Days worked:				
Fewer than 25	37	23.2	906	38.3
25–74	53	33.6	456	19.3
75–149	25	15.8	255	10.8
150–249	35	21.9	310	13.1
250 and over	9	5.6	436	18.5
Agricultural activity:[2]				
Grains	25	16.0	565	23.9
Cotton	4	2.2	83	3.5
Tobacco	6	3.5	202	8.6
Other field crops	18	11.4	347	14.7
Vegetables or melons	26	16.5	170	7.2
Fruit or tree nuts	13	8.1	248	10.5
Horticulture specialty	9	5.6	121	5.1
Beef cattle	13	8.1	150	6.4
Dairy	17	10.7	208	8.8
Other livestock	17	10.4	186	7.9
Other	12	7.5	82	3.5
Nonfarm work:				
Did nonfarmwork	102	64.0	1,067	45.1
Did farmwork only	57	36.0	1,297	54.9

[1] Numbers and percentages may not add to totals due to rounding.
[2] Refers to the crop or livestock worked with the most on the longest farm job.

Demographic Characteristics

Farm operators in 1985 were mostly white, middle aged, and male. Ninety-seven percent of all farm operators were white, 1 percent were Hispanic, and 2 percent belonged to black or other racial/ethnic groups (table 15).[a] About 6 percent of all farm operators were under 25 years of age; over half were 45 years of age or older. Over three-quarters of all farm operators were male.

[a] Because of the small number of minority farm operators, data on farm operators were not broken down by racial/ethnic group.

Table 14—Number of farm operator households, 1985[1]

Characteristic	Households	
	Thousands	*Percent*
One farm operator	1,695	74.9
Two farm operators	530	23.4
Three or more farm operators	39	1.7
Total	2,263	100.0

[1] Numbers and percentages may not add to totals due to rounding.

Table 15—Demographic characteristics of farm operators, 1985[1]

Characteristic	Farm operators	
	Thousands	*Percent*
All farm operators	2,889	100.0
Racial/ethnic group:		
White	2,789	96.5
Hispanic	30	1.0
Black and other	70	2.4
Sex:		
Male	2,204	76.3
Female	685	23.7
Age (years):		
14–17	35	1.2
18–24	128	4.4
25–34	505	17.5
35–44	656	22.7
45–54	623	21.6
55–64	609	21.1
65 and older	333	11.5
	Years	
Median age	46	

[1] Numbers and percentages may not add to totals due to rounding.

The household relationship of farm operators differed by sex. The data suggest that most female farm operators operated the farm jointly with their spouse. Seventy percent of the male operators lived in households in which they were the only farm operator, compared with only 23 percent of the female operators. Over 70 percent of the female operators were married to another farm operator, compared with only 22 percent of the male operators.

Farm operators had high levels of formal education (table 16). Three-quarters of all farm operators completed high school and one-third had some college education. There was no significant difference between the educational levels of farm operators 25 years of age and older and those of farm operators age 14–24.

Regional Location

Most farm operators were located in the eastern half of the country (fig. 5). The Corn Belt and Appalachia each accounted for about 19 percent of all farm operators, and the Lake States for another 12 percent. Corn Belt farm operators were primarily involved in grain production (including corn, wheat, soybeans, and feed grains). Tobacco was the major crop in Appalachia. Dairy and grains were the major Lake States commodities. No other farm production region accounted for more than 9 percent of the farm operators.[9]

[9] The characteristics of farm operators by farm production region are presented in appendix I.

Table 16—Years of education completed by all farm operators and operators 25 years of age and older, 1985[1]

Education	Farm operators	
	Thousands	*Percent*
All farm operators	2,889	100.0
Years of education completed:		
0–4	18	.6
5–8	368	12.7
9–11	314	10.9
12	1,214	42.0
13 and over	975	33.7
Farm operators 25 years and older	2,727	100.0
Years of education completed:		
0–4	18	.7
5–8	352	12.9
9–11	283	10.4
12	1,135	41.6
13 and over	938	34.4

[1] Numbers and percentages may not add to totals due to rounding.

Fig. 5—Number and percentage distribution of farm operators, by farm production region, 1985

*Includes Alaska and Hawaii

Employment Characteristics

Farm operators averaged 236 days operating a farm in 1985. Over two-thirds of all farm operators worked 150 or more days operating a farm and 58 percent worked 250 or more days (table 17). Only 11 percent were casual farm operators working fewer than 25 days in 1985. Almost one-half of all farm operators cited either grains or beef cattle as the product contributing most to the gross value of sales on the farm they operated.

The majority of farm operators reported their primary employment status in 1985 as other than operating a farm. Only 42 percent of all farm operators reported their primary employment activity during the year as operating a farm, while 36 percent were primarily nonfarmworkers. An additional 17 percent were not in the labor force; most of these were keeping house.

About 1.4 million or 48 percent of all farm operators did some nonfarmwork during the year (table 17). Among these, nonfarmwork accounted for a major portion of their work time as measured by days worked. Farm operators who did nonfarmwork averaged 211 days of nonfarmwork during the year (and 189 days operating a farm) and had average annual nonfarm earnings of $10,722.

Unpaid Farmworkers

Unpaid farmworkers, almost 3.8 million people in 1985, made up the largest (47 percent) component of the agricultural work force in 1985.[10] Unpaid farmworkers are those who do farmwork without receiving cash wages or salary, or receive only a "token" cash allowance, or do farmwork for room and board or payment-in-kind. Almost 24 percent of the unpaid farmworkers also worked as hired farmworkers and/or farm operators. Ninety-five percent of the unpaid farmworkers were white, 63 percent were male, and 77 percent had completed high school. Unpaid farmworkers averaged 56 days of unpaid farmwork, with over 55 percent working fewer than 15 days. Only 6 percent of all unpaid farmworkers reported unpaid farmwork as their primary employment status during the year, while 51 percent were primarily nonfarm workers. Only 36 percent of the unpaid farmworkers lived in a household with a farm operator present, but they accounted for 64 percent of the total days worked by unpaid farmworkers. This section outlines the demographic, geographic, and employment characteristics of unpaid farmworkers.

[10] Since this was the first year that the Agricultural Work Force Survey collected information on unpaid farmworkers, there are no estimates of the number of unpaid farmworkers before 1985. Other data sources which collect information on unpaid farmworkers (for example, NASS) include only those who did unpaid work on farms for at least 15 hours during the survey week. This survey includes all workers who did unpaid work at any time during the year, even for a single day.

Contrary to popular impression, most unpaid workers were not immediate family members of farm operators. Only 36 percent of the unpaid farmworkers lived in a household with a farm operator present (table 18). However, these unpaid workers do work longer at unpaid work than unpaid workers in nonfarm operator house-

Table 17—Employment characteristics of farm operators, 1985[1]

Characteristic	Farm operators	
	Thousands	*Percent*
All farm operators	2,889	100.0
Primary employment status:		
In labor force	2,388	82.7
Hired farmwork	62	2.1
Operating a farm	1,211	41.9
Unpaid farmwork	47	1.6
Nonfarmwork	1,048	36.3
Unemployed	20	.7
Not in labor force	501	17.3
Keeping house	296	10.2
Attending school	73	2.5
Other	132	4.6
Days worked as farm operator:		
Fewer than 25	310	10.7
25–74	345	12.0
75–149	266	9.2
150–249	297	10.3
250 and over	1,671	57.8
Agricultural activity:[2]		
Grains	741	25.7
Cotton	32	1.1
Tobacco	230	8.0
Other field crops	183	6.3
Vegetables or melons	117	4.1
Fruit or tree nuts	105	3.6
Horticulture specialty	69	2.4
Beef cattle	662	22.9
Dairy	288	10.0
Other livestock	353	12.2
Other	108	3.7
Nonfarmwork:		
Did nonfarmwork	1,381	47.8
Did farmwork only	1,508	52.2

[1] Numbers and percentages may not add to totals due to rounding.
[2] Refers to the crop or livestock that contributed most to the gross sales on the farm.

Table 18—Unpaid farmworkers and worker-days, 1985

Unpaid farmworkers who—	Unpaid farmworkers		Worker-days	
	Thousands	*Percent*	*Thousands*	*Percent*
Lived in household with a farm operator present	1,363	36.1	135,100	64.2
Lived in household without a farm operator present	2,414	63.9	75,479	35.8
Total	3,777	100.0	210,579	100.0

holds, because they accounted for 64 percent of the total days worked by unpaid farmworkers. On average, unpaid workers living in households with a farm operator present did 99 days of unpaid farmwork in 1985, compared with only 31 days of unpaid farmwork for people living in households without a farm operator present.

Demographic Characteristics

The majority of unpaid farmworkers were white, and 63 percent were male (table 19). Unpaid workers were relatively young; 60 percent of all unpaid farmworkers were 14–34 years of age and 10 percent were under 18. The median age for all unpaid farmworkers was 31 years.

Unpaid workers generally had high levels of education, as measured by years of schooling completed. Seventy-seven percent of the unpaid workers had completed high school and 35 percent had some college education (table 20). The percentage of unpaid farmworkers 25 years and older (when most schooling is completed) who completed high school was significantly greater than that of unpaid farmworkers age 14–24.

Regional Location

The distribution of unpaid farmworkers by farm production region resembled that of farm operators. The Corn Belt, Appalachia, and Lake States regions accounted for half of all the unpaid farmworkers (fig. 6). The Northeast was the only other region that had over 10 percent of the Nation's unpaid farmworkers. Data on the characteristics

Table 19—Demographic characteristics of unpaid farmworkers, 1985[1]

Characteristic	Unpaid farmworkers	
	Thousands	*Percent*
All unpaid farmworkers	3,777	100.0
Racial/ethnic group:		
White	3,597	95.2
Hispanic	44	1.2
Black and other	135	3.6
Sex:		
Male	2,388	63.2
Female	1,389	36.8
Age (years):		
14–17	364	9.6
18–24	769	20.4
25–34	1,136	30.1
35–44	682	18.0
45–54	353	9.4
55–64	271	7.2
65 and older	201	5.3
	Years	
Median age	31	

[1] Numbers and percentages may not add to totals due to rounding.

Fig. 6—Number and percentage distribution of unpaid farmworkers, by farm production region, 1985

*Includes Alaska and Hawaii

Table 20—Years of education completed by all unpaid farmworkers and unpaid farmworkers 25 years and older, 1985[1]

Education	Unpaid farmworkers	
	Thousands	*Percent*
All unpaid farmworkers	3,777	100.0
Years of education completed:		
0–4	12	.3
5–8	349	9.3
9–11	505	13.4
12	1,579	41.8
13 and over	1,331	35.3
Workers 25 years and older	2,644	100.0
Years of education completed:		
0–4	12	.4
5–8	195	7.4
9–11	220	8.3
12	1,164	44.0
13 and over	1,054	39.9

[1] Numbers and percentages may not add to totals due to rounding.

of unpaid farmworkers by farm production region are presented in appendix I.

Employment Characteristics

Unpaid farmworkers as a group averaged 56 days of unpaid farmwork in 1985. However, most unpaid workers worked fewer than the average number of days. Fifty-five percent of all unpaid workers worked fewer than 15 days, and 28 percent worked fewer than 5 days (table 21). Only 18 percent of unpaid workers worked 100 or more days at unpaid farmwork. About two-thirds of those who did 100 or more days of unpaid farmwork resided in farm operator households.

Few unpaid farmworkers did unpaid farmwork as their major labor force activity in 1985. Only about 6 percent of all unpaid farmworkers reported unpaid farmwork as their primary employment status during the year, while 51 percent were primarily nonfarm workers. Over one-third of the unpaid farmworkers were not in the labor force most of the year. Most were primarily keeping house or going to school.

Unpaid farmworkers were heavily involved in nonfarmwork. Sixty-nine percent of all unpaid farmworkers did nonfarmwork at some time during the year (table 21). Those unpaid farmworkers who did nonfarmwork worked an average of 201 days of nonfarmwork during the year (and 39 days of unpaid farmwork), and earned an average of $10,052 from nonfarmwork during the year.

Comparison of the Agricultural Work Force Components

The Agricultural Work Force Survey provides national level data on persons age 14 years and older who did farmwork at some time during the year. In 1985, over 8 million persons did farmwork, including 2.5 million hired farmworkers, 2.9 million farm operators, and 3.8 million unpaid farmworkers. Over 1 million workers participated in two or more of these activities. Although there is considerable diversity within each farmworker group, each had distinct characteristics associated with it:

- Hired farmworkers were more likely to be members of minority groups than either farm operators or unpaid farmworkers. Almost one-quarter of all hired farmworkers were Hispanic or black or other, compared with less than 5 percent of both the farm operators and unpaid farmworkers.

Table 21—Employment characteristics of unpaid farmworkers, 1985[1]

Characteristic	Unpaid farmworkers	
	Thousands	*Percent*
All unpaid farmworkers	3,777	100.0
Primary employment status:		
In labor force	2,436	64.5
Hired farmwork	74	2.0
Operating a farm	197	5.2
Unpaid farmwork	208	5.5
Nonfarmwork	1,912	50.6
Unemployed	45	1.2
Not in labor force	1,341	35.5
Keeping house	529	14.0
Attending school	624	16.5
Other	187	5.0
Days worked as unpaid farmworker:		
Fewer than 5	1,048	27.7
5–14	1,039	27.5
15–24	340	9.0
25–99	682	18.1
100 and over	668	17.7
Agricultural activity:[2]		
Grains	792	21.0
Cotton	34	.9
Tobacco	167	4.4
Other field crops	545	14.4
Vegetables or melons	251	6.6
Fruit or tree nuts	133	3.5
Horticulture specialty	60	1.6
Beef cattle	811	21.5
Dairy	358	9.5
Other livestock	466	12.3
Other	159	4.2
Nonfarmwork:		
Did nonfarmwork	2,606	69.0
Did farmwork only	1,171	31.0

[1] Numbers and percentages may not add to totals due to rounding.
[2] Refers to the crop or livestock worked with the most on the longest unpaid farm job.

- Hired farmworkers had the lowest level of education as measured by years of schooling completed. One-half of the hired farmworkers had not completed high school while over three-quarters of the farm operators and unpaid farmworkers were high school graduates.

- On average, farm operators were the oldest members of the agricultural work force with a median age of 46 years. The median age of unpaid farmworkers was 31 years and only 24 years for hired farmworkers.

- While the majority of hired farmworkers in each group were male, unpaid farmworkers were the most likely to be female. Almost 37 percent of the unpaid farmworkers were female, compared with 22 percent of the hired farmworkers, and 24 percent of the farm operators.

- Only about 6 percent of the unpaid farmworkers cited unpaid farmwork as their primary employment during the year, while 29 percent of the hired farmworkers cited hired farmworker and 42 percent of the farm operators cited operating a farm as their primary employment in 1985.

Despite differences in basic characteristics among the three groups, they all shared one important characteristic—a large percentage of workers were engaged in nonfarmwork. Over 45 percent of both the hired farmworkers and farm operators, and 69 percent of the unpaid farmworkers, did some nonfarmwork in 1985.

Nonfarmwork was an important source of earnings for all three groups, but farm operators and unpaid farmworkers had higher average earnings from nonfarmwork than did hired farmworkers. Farm operators who had nonfarm jobs earned an average $10,722 in 1985 in nonfarm earnings. Unpaid farmworkers who did nonfarmwork had about the same amount of earnings from nonfarmwork ($10,052), but hired workers who did nonfarmwork earned only an average of $5,569 from nonfarmwork. Part of the group difference in nonfarm earnings is due to farm operators and unpaid workers working more days at nonfarmwork than hired workers; farm operators who had nonfarm jobs averaged 211 days, unpaid workers averaged 201 days, and hired workers averaged 140 days. But some of the difference is because hired workers earned less per day than did farm operators and unpaid workers. On average, hired workers earned about $40 per day of nonfarmwork, while farm operators and unpaid workers earned about $50 per day.

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Appendix I: Statistical Tables

Appendix table 1—Number of hired farmworkers by days of farmwork[1]

Year	Days of hired farmwork				
	Fewer than 25	25–74	75–149	150–249	250 and over
			Thousands		
1950	NA	NA	NA	NA	NA
1951	1,118	925	379	301	551
1952	1,008	928	324	296	424
1953	—	—	—	—	—
1954	1,101	756	318	364	470
1955					
1956	1,497	920	410	305	443
1957	1,762	1,044	501	256	399
1958	1,893	NA	NA	NA	NA
1959	1,412	863	502	348	452
1960	1,531	868	465	390	438
1961	1,600	849	354	281	404
1962	1,555	933	408	284	442
1963	1,735	771	392	309	390
1964	1,369	924	413	326	338
1965	1,264	807	397	282	379
1966	1,130	717	339	211	367
1967	1,338	738	327	277	397
1968	1,299	731	308	256	324
1969	1,106	718	258	189	301
1970	1,093	623	293	172	306
1971	1,191	648	213	213	285
1972	1,130	663	361	288	367
1973	1,085	567	351	247	421
1974	1,169	619	308	274	367
1975	1,180	556	319	228	355
1976	1,145	652	347	290	333
1977	1,056	667	322	295	391
1978	—	—	—	—	—
1979	898	672	323	335	423
1980	—	—	—	—	—
1981	969	538	310	281	394
1982	—	—	—	—	—
1983	973	491	397	386	349
1984	—	—	—	—	—
1985	943	509	280	344	445

— = No survey conducted.
NA = Not available.
[1] Data are rounded to nearest thousand.

Appendix table 2—Demographic and employment characteristics of all hired farmworkers and those who did farmwork only, by average number of days worked and earnings, 1985[1]

Characteristic	Number of workers	Farm and nonfarm earnings	Hired farmworkers		Workers who did farmwork only		
			Days worked	Annual earnings	Number of workers	Days worked	Annual earnings
	Thousands	*Dollars*	*Number*	*Dollars*	*Thousands*	*Number*	*Dollars*
All workers	2,522	5,826	107	3,247	1,354	148	4,702
Racial/ethnic group:							
White	1,922	6,015	101	3,018	920	145	4,572
Hispanic	326	5,563	145	4,795	245	173	5,804
Black and other	274	4,812	104	3,008	189	131	3,906
Sex:							
Male	1,980	6,399	114	3,642	1,081	161	5,292
Female	542	3,733	79	1,801	273	98	2,367
Age (years):							
14–17	552	1,092	48	743	354	49	693
18–24	739	5,243	99	2,666	302	159	4,691
25–34	601	9,201	124	4,268	268	205	7,219
35–44	260	8,367	139	4,736	144	193	6,910
45–54	185	7,666	170	6,269	135	201	7,543
55–64	110	7,084	169	5,280	85	196	6,060
65 and older	75	4,186	119	3,626	65	130	3,602
Days of farmwork:							
Fewer than 25	943	4,131	10	232	347	10	210
25–74	509	4,041	45	1,201	229	45	1,283
75–149	280	5,679	106	2,810	129	106	2,720
150–249	344	7,215	198	6,259	262	200	6,438
250 and over	445	10,474	313	9,917	386	312	10,260
Primary employment status:							
Hired farmwork	723	8,395	241	8,033	616	250	8,469
Farm operator	127	7,048	131	5,331	82	136	5,416
Unpaid farmworker	21	[2]	[2]	[2]	4	[2]	[2]
Nonfarmwork	560	10,466	41	1,083	0	0	0
Unemployed	100	2,219	48	1,337	55	63	1,877
Keeping house	159	1,938	53	1,450	101	61	1,452
Attending school	718	1,272	48	731	418	52	779
Other	114	2,883	55	1,516	78	50	1,563
Migratory status:							
Migrant	159	5,692	95	2,588	57	109	3,423
Nonmigrant	2,363	5,835	108	3,291	1,297	150	4,758
Years of education completed by workers 25 years and older:							
0–4	96	5,782	182	5,549	90	192	5,872
5–8	213	5,946	154	4,878	164	180	5,545
9–11	188	6,719	145	4,214	113	193	5,730
12	497	9,205	124	4,526	238	195	7,628
13 and over	236	10,799	130	5,048	93	214	8,642

[1] Numbers may not add to totals due to rounding.
[2] Averages not shown when base is fewer than 50,000.

Appendix table 3—Demographic and employment characteristics of hired farmworkers who did both farmwork and nonfarmwork, by average number of days worked and earnings, 1985[1]

Characteristic	Number of workers	Farm and nonfarm earnings	Hired farmwork		Nonfarmwork	
			Days worked	Annual earnings	Days worked	Annual earnings
	Thousands	*Dollars*	*Number*	*Dollars*	*Number*	*Dollars*
All workers	1,168	7,129	59	1,560	140	5,568
Racial/ethnic group:						
White	1,002	7,340	60	1,592	142	5,747
Hispanic	81	4,836	61	1,749	96	3,086
Black and other	85	6,833	43	1,003	150	5,830
Sex:						
Male	900	7,727	59	1,661	143	6,067
Female	268	5,123	59	1,224	128	3,899
Age (years):						
14–17	198	1,805	46	833	66	972
18–24	437	5,625	57	1,267	139	4,358
25–34	333	10,799	59	1,890	176	8,909
35–44	116	10,185	71	2,022	157	8,163
45–54	50	7,998	88	2,807	152	5,191
55–64	25	[2]	[2]	[2]	[2]	[2]
65 and older	10	[2]	[2]	[2]	[2]	[2]
Days of farmwork:						
Fewer than 25	596	6,416	9	245	151	6,171
25–74	280	6,303	45	1,133	137	5,170
75–149	151	8,202	106	2,887	137	5,316
150–249	82	9,713	194	5,684	98	4,029
250 and over	60	11,860	317	7,697	105	4,163
Primary employment status:						
Hired farmwork	108	7,974	191	5,541	70	2,433
Farm operator	45	[2]	[2]	[2]	[2]	[2]
Unpaid farmworkers	17	[2]	[2]	[2]	[2]	[2]
Nonfarmwork	560	10,466	41	1,083	204	9,383
Unemployed	45	[2]	[2]	[2]	[2]	[2]
Keeping house	57	2,799	40	1,446	64	1,353
Attending school	300	1,958	42	664	76	1,294
Other	36	[2]	[2]	[2]	[2]	[2]
Migratory status:						
Migrant	102	6,968	87	2,118	133	4,850
Nonmigrant	1,067	7,144	56	1,507	140	5,637
Years of education completed by workers 25 years and older:						
0–4	6	[2]	[2]	[2]	[2]	[2]
5–8	49	[2]	[2]	[2]	[2]	[2]
9–11	75	8,206	73	1,933	135	6,273
12	259	10,659	58	1,666	181	8,993
13 and over	144	12,192	76	2,727	179	9,465

[1] Numbers may not add to totals due to rounding.

[2] Averages not shown when base is fewer than 50,000 workers.

Appendix table 4—Demographic and employment characteristics of all hired farmworkers, by farm production region, 1985[1]

Characteristic	Farm production region										
	United States	North-east	Lake States	Corn Belt	Northern Plains	Appala-chia	South-east	Delta States	Southern Plains	Moun-tain	Paci-fic
	Thousands										
All hired farmworkers	2,522	265	269	428	154	355	164	90	217	179	401
Racial/ethnic group:											
White	1,922	249	262	421	149	251	72	55	108	132	224
Hispanic	326	6	7	3	1	2	31	0	96	45	135
Black and other	274	10	1	4	4	102	61	35	13	1	42
Sex:											
Male	1,980	200	210	340	127	258	123	86	165	154	317
Female	542	65	59	88	27	97	41	4	53	25	84
Age (years):											
14–17	552	72	78	115	32	66	27	14	30	32	84
18–24	739	56	78	136	46	109	36	24	72	62	120
25–34	601	64	58	101	38	87	33	28	56	39	96
35–44	260	27	26	31	19	34	31	8	11	23	51
45–54	185	21	12	17	7	28	24	4	22	10	39
55–64	110	12	7	13	5	14	11	10	19	8	11
65 and over	75	13	9	15	7	17	1	2	8	3	1
Years of education completed by workers 25 years old and older:											
0–4	96	2	1	5	0	7	13	2	26	6	32
5–8	213	24	11	13	9	38	18	11	30	13	47
9–11	188	19	12	12	4	39	39	14	20	8	21
12	497	62	73	98	39	76	20	16	27	31	55
13 and over	236	30	17	49	24	20	10	8	11	26	41
Days of farmwork:											
Fewer than 25	943	92	97	221	55	160	23	33	85	55	123
25–74	509	51	60	70	40	76	35	7	48	46	76
75–149	280	21	31	46	23	38	24	11	23	25	39
150–249	344	29	33	40	11	37	50	18	22	12	92
250 and over	445	73	50	52	25	43	31	20	39	41	71
Migratory status:											
Migrant	159	6	20	19	8	7	24	3	31	23	19
Nonmigrant	2,363	259	250	410	146	347	140	87	186	156	382
Nonfarmwork:											
Did nonfarmwork	1,168	113	131	236	80	166	52	30	112	98	151
Did farmwork only	1,354	152	139	192	74	189	112	59	106	81	250
Primary employment status during year:											
Hired farmwork	723	85	59	84	35	66	78	38	57	54	167
Operated farm	127	10	14	33	18	12	8	2	8	11	10
Unpaid farmwork	21	0	1	8	3	2	2	0	0	1	3
Nonfarmwork	560	57	74	104	34	94	18	22	46	36	76
Unemployed	100	8	6	10	3	22	8	6	8	12	17
Keeping house	159	11	11	25	6	41	9	1	21	12	21
Attending school	718	85	88	156	50	87	34	15	63	44	97
Other	114	9	16	9	4	30	7	6	15	8	10
Agricultural activity:[2]											
Grains	590	25	90	198	77	31	14	20	30	36	68
Cotton	86	0	0	8	2	5	4	12	35	17	3
Tobacco	208	3	4	5	0	180	10	0	6	0	0
Other field crops	365	56	43	82	22	24	11	17	44	43	23
Vegetables or melons	196	23	8	18	3	18	38	5	33	11	40
Fruits or tree nuts	261	34	7	3	0	2	22	3	2	13	175
Horticulture specialty	130	10	14	8	0	27	28	6	8	1	27
Beef cattle	163	8	6	17	19	12	14	13	27	26	21
Dairy	225	55	74	16	10	22	2	4	2	15	26
Other livestock	203	32	21	58	17	18	14	7	12	11	12
Other	94	20	3	15	4	15	6	2	18	5	6

[1] Data are rounded to nearest thousand.

[2] Refers to the crop or livestock worked with most on the farm where respondent worked the greatest number of days in 1985.

Appendix table 5—Geographic distribution of all hired farmworkers and those who did farmwork only, by average number of days worked and earnings, 1985

Farm production region	All hired farmworkers				Farmworkers who did hired farmwork only		
	Number of workers	Farm and nonfarm earnings	Farmwork		Number of workers	Days worked	Annual earnings
			Days worked	Annual earnings			
	Thousands	*Dollars*	*Number*	*Dollars*	*Thousands*	*Number*	*Dollars*
United States	2,522	5,826	107	3,247	1,354	148	4,702
Northeast	265	6,460	131	3,455	152	170	4,669
Lake States	269	6,002	114	3,137	139	162	4,809
Corn Belt	428	5,409	79	2,339	192	124	3,651
Northern Plains	154	5,985	96	3,033	74	146	4,881
Appalachia	355	5,024	85	2,300	189	112	3,209
Southeast	164	6,097	143	4,465	112	167	5,215
Delta States	90	5,708	129	3,404	59	156	4,327
Southern Plains	217	5,569	101	3,105	106	149	4,758
Mountain	179	6,007	116	3,808	81	174	6,303
Pacific	401	6,357	118	4,366	250	154	5,861

Appendix table 6—Geographic distribution of hired farmworkers who did both farmwork and nonfarmwork, by average number of days worked and earnings, 1985

Farm production region	Number of workers	Farm and nonfarm earnings	Farmwork		Nonfarmwork	
			Days worked	Annual earnings	Days worked	Annual earnings
	Thousands	*Dollars*	*Number*	*Dollars*	*Number*	*Dollars*
United States	1,168	7,129	59	1,560	140	5,568
Northeast	113	8,872	77	1,822	158	7,050
Lake States	131	7,266	63	1,367	153	5,900
Corn Belt	236	6,835	42	1,273	138	5,562
Northern Plains	80	7,003	49	1,328	141	5,675
Appalachia	166	7,093	55	1,265	148	5,828
Southeast	52	8,008	91	2,841	130	5,167
Delta States	30	[1]	[1]	[1]	[1]	[1]
Southern Plains	112	6,336	56	1,543	126	4,794
Mountain	98	5,761	69	1,736	122	4,025
Pacific	151	7,179	58	1,886	130	5,293

[1] Averages not shown when base is fewer than 50,000 workers.

Appendix table 7—Annual total, farm, and nonfarm earnings of hired farmworkers, by farm production region, 1985[1]

Characteristic	Farm production region										
	United States	North-east	Lake States	Corn Belt	Northern Plains	Appala-chia	South-east	Delta States	Southern Plains	Moun-tain	Paci-fic
	Thousands										
All hired farmworkers	2,522	265	269	428	154	355	164	90	217	179	401
Annual total earnings, all hired farmworkers:											
Less than $500	505	55	59	102	18	93	27	13	43	26	69
$500–999	197	21	22	30	18	25	14	10	19	21	18
$1,000–2,499	367	35	37	73	28	45	19	2	38	30	60
$2,500–3,999	233	18	25	47	14	40	5	7	19	17	40
$4,000–5,499	178	16	18	24	12	29	23	17	9	9	20
$5,500–7,499	257	26	26	19	17	33	30	19	11	11	65
$7,500–9,999	240	34	23	32	11	32	15	9	29	17	39
$10,000 and over	544	61	58	101	35	57	32	13	49	48	91
Annual farm earnings, all hired farmworkers:											
Less than $500	989	102	104	213	54	172	38	29	98	55	125
$500–999	302	33	32	57	22	45	15	10	28	28	32
$1,000–2,499	338	32	52	47	30	40	23	4	26	31	54
$2,500–3,999	161	12	19	23	11	29	4	11	11	12	29
$4,000–5,499	126	9	12	18	7	13	26	12	8	7	14
$5,500–7,499	208	27	17	24	9	21	24	15	5	7	60
$7,500–9,999	155	26	8	16	7	19	18	4	17	8	32
$10,000 and over	243	26	24	31	15	16	16	6	24	31	55
Annual nonfarm earnings, hired farmworkers who did nonfarmwork:											
Less than $500	213	21	22	56	12	18	9	1	22	22	29
$500–999	132	8	16	36	10	7	9	3	9	15	19
$1,000–2,499	211	19	25	27	15	40	11	4	25	22	24
$2,500–3,999	128	9	9	23	7	21	4	3	13	8	30
$4,000–5,499	80	10	12	7	4	16	6	2	10	6	7
$5,500–7,499	59	7	7	9	8	15	0	6	2	3	3
$7,500–9,999	76	6	8	11	5	8	3	4	12	8	12
$10,000 and over	269	32	32	67	18	41	10	7	19	14	28

[1] Numbers may not add to totals due to rounding.

Appendix table 8—Demographic and employment characteristics of farm operators, by farm production region, 1985[1]

Characteristic	United States	Farm production region									
		Northeast	Lake States	Corn Belt	Northern Plains	Appalachia	Southeast	Delta States	Southern Plains	Mountain	Pacific
	Thousands										
All farm operators	2,889	204	359	548	259	543	194	111	222	198	251
Racial/ethnic group:											
White	2,789	197	358	545	256	517	181	109	209	180	238
Hispanic	30	6	0	3	2	0	2	0	4	12	1
Black and other	70	2	1	0	1	26	11	2	9	6	12
Sex:											
Male	2,204	148	272	449	204	409	160	87	154	143	177
Female	685	56	87	99	55	134	34	25	68	54	74
Age (years):											
14–17	35	1	4	3	1	7	10	0	4	4	2
18–24	128	7	9	19	10	34	12	5	13	15	5
25–34	505	40	110	79	61	74	29	21	26	31	35
35–44	656	41	85	101	39	155	46	19	40	53	77
45–54	623	51	49	125	44	105	48	30	67	42	62
55–64	609	43	61	160	66	99	29	25	53	35	39
65 and older	333	22	41	61	38	68	21	11	20	19	31
Years of education completed by workers 25 years old and older:											
0–4	18	0	1	5	1	7	0	1	2	1	0
5–8	352	22	48	53	37	110	21	15	19	13	13
9–11	283	33	29	57	21	71	21	6	9	18	18
12	1,135	89	161	267	114	191	66	48	88	55	56
13 and over	938	51	106	144	76	122	65	36	88	92	158
Days of farmwork:											
Fewer than 25	310	15	33	41	25	63	18	21	20	28	44
25–74	345	23	29	35	23	94	29	8	48	26	30
75–149	266	12	33	50	25	43	14	14	18	17	39
150–249	297	20	26	56	23	73	36	10	14	21	19
250 and over	1,671	134	239	364	163	270	97	58	122	105	119
Nonfarmwork:											
Did nonfarmwork	1,381	100	140	229	103	296	111	53	143	89	117
Did farmwork only	1,508	104	219	319	157	246	83	58	79	109	134
Primary employment status during year:											
Hired farmwork	62	8	9	11	6	10	2	3	4	5	2
Operated farm	1,211	85	186	280	144	168	54	41	64	94	95
Unpaid farmwork	47	2	3	17	6	8	0	1	6	1	2
Nonfarmwork	1,048	75	108	165	56	239	98	46	122	51	89
Unemployed	20	0	0	4	3	9	0	0	0	2	2
Keeping house	296	21	38	40	24	70	16	10	19	27	30
Attending school	73	5	3	7	7	11	15	2	6	9	8
Other	132	7	12	24	13	27	9	7	2	8	23
Agricultural activity:[2]											
Grains	741	19	120	248	124	68	28	18	33	57	26
Cotton	32	0	2	2	0	6	0	2	13	6	0
Tobacco	230	3	3	6	2	206	7	1	2	0	0
Other field crops	183	15	27	23	18	17	10	6	16	25	27
Vegetables or melons	117	5	14	9	1	42	16	6	12	4	8
Fruits or tree nuts	105	6	0	2	0	6	10	1	0	6	75
Horticulture specialty	69	10	3	7	1	9	10	0	7	4	17
Beef cattle	662	23	21	115	63	104	66	51	110	61	49
Dairy	288	54	121	51	15	29	0	5	2	4	7
Other livestock	353	47	42	75	30	45	39	9	15	26	26
Other	108	23	6	10	4	13	9	12	13	4	16

[1] Data are rounded to the nearest thousand.
[2] Refers to the crop or livestock that contributed most to the gross sales on the farm.

Appendix table 9—Demographic and employment characteristics of farm operators who did nonfarmwork by average number of nonfarmwork days worked and earnings, 1985[1]

Characteristic	Number of workers	Nonfarmwork	
		Days worked	Annual earnings
	Thousands	*Number*	*Dollars*
All workers	1,381	211	10,722
Age (years):			
14–17	11	[2]	[2]
18–24	63	163	7,418
25–34	266	210	11,117
35–44	404	218	12,254
45–54	340	217	9,800
55–64	252	214	10,943
65 and older	45	[2]	[2]
Sex:			
Male	1,084	218	11,431
Female	297	187	8,135
Days of farmwork:			
Fewer than 25	219	217	10,666
25–74	237	223	11,483
75–149	178	210	11,864
150–249	179	192	9,333
250 and over	567	210	10,504
Primary employment status:			
Hired farmwork	13	[2]	[2]
Operated farm	194	116	4,709
Unpaid farmwork	19	[2]	[2]
Nonfarmwork	1,048	240	12,596
Unemployed	4	[2]	[2]
Keeping house	49	[2]	[2]
Attending school	21	[2]	[2]
Other	33	[2]	[2]
Years of education completed by workers 25 years and older:			
0–4	6	[2]	[2]
5–8	110	228	10,983
9–11	134	210	10,785
12	522	213	11,093
13 and over	533	213	10,761

[1] Numbers may not add to totals due to rounding.
[2] Averages not shown when base is fewer than 50,000 workers.

Appendix table 10—Geographic distribution of farm operators who did nonfarmwork, by average number of nonfarmwork days worked and earnings, 1985

Farm production region	Nonfarmwork		
	Number of workers	Days worked	Annual earnings
	Thousands	*Number*	*Dollars*
United States	1,381	211	10,722
Northeast	100	214	10,653
Lake States	140	202	9,976
Cornbelt	229	213	10,825
Northern Plains	103	173	8,744
Appalachia	296	218	11,413
Southeast	111	226	11,775
Delta States	53	232	13,457
Southern Plains	143	219	10,119
Mountain	89	184	9,892
Pacific	117	219	10,577

Appendix table 11—Demographic and employment characteristics of unpaid farmworkers, by farm production region, 1985[1]

Characteristic	United States	Farm production region									
		North-east	Lake States	Corn Belt	Northern Plains	Appala-chia	South-east	Delta States	Southern Plains	Moun-tain	Paci-fic
	Thousands										
All unpaid farmworkers	3,777	399	493	860	309	549	160	113	311	245	338
Racial/ethnic group:											
White	3,597	379	487	853	299	526	140	106	283	220	304
Hispanic	44	7	0	0	2	0	2	0	11	13	9
Black and other	135	12	6	7	7	23	18	7	17	12	25
Sex:											
Male	2,388	258	303	559	187	338	95	81	219	164	184
Female	1,389	141	190	301	122	211	65	31	92	81	155
Age (years):											
14–17	364	42	39	91	30	47	16	12	29	28	29
18–24	769	76	87	193	64	116	41	19	56	55	64
25–34	1,136	138	168	232	88	150	39	39	118	64	100
35–44	682	74	103	134	48	112	27	15	47	44	79
45–54	353	36	36	81	22	74	12	15	32	25	19
55–64	271	20	28	77	31	29	14	6	17	24	26
65 and older	201	14	31	52	25	21	11	7	12	6	22
Years of education completed by workers 25 years old and older:											
0–4	12	2	1	2	0	4	2	1	0	0	0
5–8	195	10	32	44	21	41	11	7	12	5	13
9–11	220	19	27	59	13	42	12	6	18	9	14
12	1,164	115	175	316	93	188	36	33	71	58	77
13 and over	1,054	135	132	156	88	113	41	35	124	90	141
Days of unpaid farmwork:											
Fewer than 5	1,048	149	154	210	59	130	36	27	103	81	98
5–14	1,039	90	125	215	94	135	46	30	102	77	127
15–24	340	40	49	57	24	74	5	12	44	17	19
25–99	682	62	78	176	68	114	38	21	31	40	54
100 and over	668	58	87	202	63	97	35	24	31	30	40
Nonfarmwork:											
Did nonfarmwork	2,606	302	333	556	186	399	115	69	240	176	229
Did farmwork only	1,171	96	160	305	122	150	45	44	71	69	109
Primary employment status during year:											
Hired farmwork	74	10	13	15	7	5	6	1	2	5	11
Operated farm	197	10	27	40	40	30	9	5	11	16	11
Unpaid farmwork	208	9	21	70	22	25	13	8	11	8	20
Nonfarmwork	1,912	243	253	377	121	310	63	62	198	118	169
Unemployed	45	5	3	14	3	5	0	0	4	6	6
Keeping house	529	40	74	140	48	75	22	11	24	36	59
Attending school	624	67	69	164	49	83	29	21	49	43	51
Other	187	16	33	41	19	18	18	6	11	13	11
Agricultural activity:[2]											
Grains	792	37	133	289	126	54	18	9	32	44	50
Cotton	34	1	0	10	0	0	2	1	9	0	11
Tobacco	167	6	7	5	0	145	2	1	1	0	0
Other field crops	545	78	65	129	24	82	7	17	42	48	54
Vegetables or melons	251	35	29	33	4	63	29	15	25	14	4
Fruits or tree nuts	133	27	15	8	1	5	6	1	8	12	50
Horticulture specialty	60	17	3	6	2	6	8	0	8	0	8
Beef cattle	811	38	33	162	95	111	38	43	132	84	76
Dairy	358	78	138	68	16	15	2	1	2	5	32
Other livestock	466	55	47	126	35	44	29	23	27	31	47
Other	159	27	24	25	5	23	19	2	23	6	5

[1] Numbers may not add to totals due to rounding.
[2] Refers to the crop or livestock worked with the most on the longest unpaid farm job.

Appendix table 12—Demographic and employment characteristics of unpaid workers who did nonfarmwork, by average number of nonfarmwork days worked and earnings, 1985[1]

Characteristic	Number of workers	Nonfarmwork	
		Days worked	Annual earnings
	Thousands	*Number*	*Dollars*
All workers	2,606	201	10,052
Age (years):			
14–17	130	65	933
18–24	633	180	7,247
25–34	926	223	12,225
35–44	540	222	12,509
45–54	217	202	8,933
55–64	126	202	10,684
65 and older	34	[2]	[2]
Sex:			
Male	1,749	214	11,375
Female	857	174	7,353
Days of farmwork:			
Fewer than 25	1,847	208	10,527
25–74	380	194	9,504
75–149	170	171	8,172
150–249	89	156	6,873
250 and over	120	183	9,505
Primary employment status:			
Hired farmwork	35	[2]	[2]
Operated farm	46	[2]	[2]
Unpaid farmwork	66	155	7,710
Nonfarmwork	1,912	234	12,500
Unemployed	22	[2]	[2]
Keeping house	137	93	1,985
Attending school	325	97	1,951
Other	64	173	8,503
Years of education completed by workers 25 years and older:			
0–4	2	[2]	[2]
5–8	55	179	8,210
9–11	137	193	9,057
12	803	216	11,549
13 and over	845	255	12,419

[1] Numbers may not add to totals due to rounding.
[2] Averages not shown when base is fewer than 50,000 workers.

Appendix table 13—Geographic distribution of unpaid workers who did nonfarmwork, by average number of nonfarmwork days worked and earnings, 1985[1]

Farm production region	Nonfarmwork		
	Number of workers	Days worked	Annual earnings
	Thousands	*Number*	*Dollars*
United States	2,606	201	10,052
Northeast	302	216	11,085
Lake States	333	203	10,229
Corn Belt	556	189	9,474
Northern Plains	186	190	9,075
Appalachia	399	211	10,603
Southeast	115	185	7,556
Delta States	69	229	11,501
Southern Plains	240	205	10,610
Mountain	176	196	9,524
Pacific	229	193	10,307

[1] Numbers may not add to totals due to rounding.

Appendix II: Source and Reliability of Estimates

Estimates in this report are based on data obtained in December 1985 from supplementary questions in the CPS of the Bureau of the Census.

Sampling Procedures and Questionnaire Design

The CPS sample was initially selected from 1980 census files and is updated periodically to reflect new home construction. This sample includes 729 areas comprising 1,973 counties, independent cities, and minor civil divisions in each State and the District of Columbia, but excludes Puerto Rico and other U.S. territories and possessions. Trained interviewers collected the information from approximately 59,500 U.S. households. The supplementary questions on the December survey were asked of persons 14 years of age and older who did farmwork (including hired farmworkers, farm operators, and unpaid farmworkers) during 1985. Questions concerned the number of days of farmwork, migratory status of hired farmworkers, hired nonfarmwork and wages, principal employment status in 1985, residence, and other matters. Persons who did farmwork during 1985 but who died, entered the armed forces, or were no longer in the civilian noninstitutional population for other reasons were not included. Also, foreign nationals who did farmwork in this country and returned to their homes before the field collection were not included.

The estimating procedure used for the CPS data involves the expansion of the sample results to independent estimates of the U.S. civilian noninstitutional population by age, race, and sex. These independent estimates are based on statistics from the 1980 Census of Population; statistics on births, deaths, immigration, and emigration; and statistics on the number of people in the armed forces.

Reliability of the Estimates

Since the CPS estimates in this report are based on a sample, they may differ somewhat from the figures that would have been obtained from a complete census using the same schedules, instructions, and enumerators. There are two types of errors possible in an estimate based on a sample survey: sampling and nonsampling. Sampling standard errors are provided for data in this report, but the extent of nonsampling error is unknown. Consequently, particular care should be exercised in the interpretation of figures based on a relatively small number of cases or on small differences among estimates.

Nonsampling Variability

As in any survey work, results are subject to errors of response and nonreporting in addition to sampling variability. Nonsampling errors can be attributed to many sources. A partial list would include inability to obtain information about all cases in the sample, definitional difficulties, differences in the interpretation of questions, respondents' inability or unwillingness to provide correct information, inability of respondents to recall information, mistakes made in recording, coding, processing data, estimating values of missing data, and failure to represent all units in the sample.

Undercoverage in the CPS results from missed housing units and missed persons within sampled households. Overall undercoverage, as compared with the level of the 1980 decennial census, is about 7 percent. CPS undercoverage varies with age, sex, and race. Undercoverage is generally larger for males than females and for blacks and other races than for whites. Ratio estimation to independent age-sex-race population controls partially corrects for the bias due to survey undercoverage. However, biases exist in the estimates to the extent that missed persons in missed households or missed persons in interviewed households have different characteristics than interviewed persons in the same age-sex-race group. Further, the independent population controls used have not been adjusted for undercoverage in the 1980 census.

Sampling Variability

Since the size of most nonsampling errors is unknown, the reliability of an estimate is described only in terms of standard errors. These are primarily measures of sampling variability; that is, the variations that might occur by chance because a sample, rather than the whole of the population, is surveyed. As calculated for this report, the standard error also partially measures the effect of certain response and enumeration errors, but it does not measure any systematic biases in the data. The chances are about 68 out of 100 that an estimate from the sample would differ from a complete census figure by less than the standard error. The chances are about 90 out of 100 that this difference would be less than 1.6 times the standard error, and the chances are about 95 out of 100 that the difference would be 1.96 times the standard error.

Comparability With Other Data

Data obtained from the CPS are not entirely comparable with data obtained from other governmental sources. This is due in large part to differences in survey processes. Therefore, caution should be used when comparing data in this report with data from other sources.

Standard Error Tables and Their Use

Appendix tables 14–17 provide approximations of standard errors of various estimates shown in this report for

data on total, white, and black and other farmworkers (including hired farmworkers, farm operators, and unpaid farmworkers). To obtain standard errors for workers of Hispanic origin, multiply the standard error in appendix tables 14–17 by 1.4.

Standard errors for values not shown in the standard errors tables may be calculated by using formulas (1), (2), or (3) as appropriate or approximated by interpolation. To derive standard errors that would be applicable to a wide variety of items and could be prepared at a moderate cost, a number of approximations were required. The tables of standard errors (along with the factor for persons of Hispanic origin) thus indicate the size of the standard errors rather than the precise standard error for any specific item.

Standard Errors of Estimated Numbers

Appendix table 14 shows standard errors, σ_x, for estimated numbers of farmworkers. Linear interpolation may be used to obtain standard errors for intermediate values not shown in the tables.

Alternately, standard errors can be calculated using the following formula (1), which was used to compute the tabular standard errors. Direct computation will give more accurate results than linear interpolation.

$$\sigma_x = c\sqrt{ax^2 + bx}, \qquad (1)$$

where x is the actual size of the estimate (not rounded to thousands); a is 0.000489; b is 4,859; and c is 1.0 for total, white, or black and other persons, and 1.4 for persons of Hispanic origin. Formula (1) is used to calculate standard errors for estimated numbers of farmworkers only.

Standard Errors of Estimated Percentages

Appendix table 15 shows standard errors of estimated percentages of farmworkers. The reliability of an estimated percentage computed by using sample data for both numerator and the denominator depends on both the size of the percentage and the size of the total on which the percentage was based. Estimated percentages are relatively more reliable than the corresponding estimates of the numerators of the percentages, particularly if the percentages are 50 percent or more. Linear interpolation may be used to obtain standard errors for intermediate values of the percentages and the base of the percentage shown in appendix table 15. Or standard errors, $\sigma_{x,p}$, can be calculated using formula (2). Direct computation will give more accurate results than linear interpolation.

$$\sigma_{x,p} = c\sqrt{\frac{b}{x}p\,(100-p)}, \qquad (2)$$

where x is the actual size (not rounded to thousands) of the subclass of the population which is the base of the percentage; p is the percentage ($0 \leq p \leq 100$); b is 4,859; and c is 1.0 for total, white, or black and other persons, and 1.4 for persons of Hispanic origin. Formula (2) is used to calculate standard errors for estimated percentages of farmworkers only.

Standard Errors of Estimated Averages

Averages are subject to large sampling variability since the sample estimates of an average are affected by extreme values. Appendix table 16 shows standard errors of average numbers of days worked, and appendix table 17 shows standard errors of average annual earnings. Linear interpolation may be used to obtain standard errors for intermediate values not shown.

Illustration of Use of Standard Error Tables

Table 3 of this report shows that 1,980,000 males performed hired farmwork in 1985. Interpolation of data in appendix table 14 shows the standard error for an estimate of this size to be approximately 106,000. Thus, the chances are 68 out of 100 that the estimate would have been a figure differing from a complete census figure by less than 106,000. The chances are 95 out of 100 that the estimate would have differed from a complete census figure by less than 208,000 (1.96 times the standard error).

Appendix table 1 shows that 37 percent of the farmworkers worked fewer than 25 days. Interpolation in appendix table 15 indicates that the standard error for 37 percent of a base of 2,522,000 would be approximately 2.1 percent. Consequently, chances are 68 out of 100 that the estimated 37 percent would have differed from a complete census figure by less than 2.1 percent; the chances are 95 out of 100 that the estimate would have differed from a complete census figure by less than 4.1 percent. For example, the 95-percent confidence interval would be from 32.9 to 41.1 percent.

Appendix table 14—Standard errors for estimated numbers of farmworkers (68 chances out of 100)

Size of estimate	Standard error
Thousands	
10	7
25	11
50	16
100	22
250	35
500	51
1,000	73
2,500	123
3,000	138

Note: To obtain approximate standard errors for persons of Hispanic origin, multiply the above standard errors by 1.4.

Appendix table 15—Standard errors for estimated percentages of farmworkers (68 chances out of 100)

Base of percentage (thousands)	Estimated percentages							
	1 or 99	2 or 98	5 or 95	10 or 90	15 or 85	25 or 75	35 or 65	50
	Percent							
25	4.4	6.2	9.6	13.2	15.7	19.1	21.0	22.0
50	3.1	4.4	6.8	9.4	11.1	13.5	14.9	15.6
75	2.5	3.6	5.6	7.6	9.1	11.0	12.1	12.7
100	2.2	3.1	4.8	6.6	7.9	9.5	10.5	11.0
250	1.4	2.0	3.0	4.2	5.0	6.0	6.7	7.0
500	1.0	1.4	2.2	3.0	3.5	4.3	4.7	4.9
750	.8	1.1	1.8	2.4	2.9	3.5	3.8	4.0
1,000	.7	1.0	1.5	2.1	2.5	3.0	3.3	3.5
2,500	.4	.6	1.0	1.3	1.6	1.9	2.1	2.2
3,000	.4	.6	.9	1.2	1.4	1.7	1.9	2.0

Note: To obtain approximate standard errors for persons of Hispanic origin, multiply the above standard errors by 1.4.

Appendix table 16—Standard errors of average number of days worked (68 chances out of 100)

Base of average number of farm workers (thousands)	Average number of days worked per year per person									
	10	25	50	75	100	125	150	200	250	300
	Number									
50	4.5	7.5	11.1	14.1	17.1	19.8	22.4	27.6	32.5	37.5
100	3.3	5.3	8.0	10.3	12.4	14.6	16.6	20.6	24.4	28.2
200	2.4	3.8	5.9	7.7	9.4	11.1	12.7	15.9	19.1	22.3
250	2.0	3.5	5.3	7.0	8.7	10.2	11.8	14.8	17.9	20.8
500	1.5	2.6	4.2	5.5	6.9	8.2	9.6	12.3	15.0	17.7
750	1.2	2.3	3.6	4.9	6.2	7.6	8.8	11.4	13.9	16.5
1,000	1.1	2.0	3.4	4.6	5.9	7.1	8.4	10.8	13.4	15.9
2,500	.8	1.6	2.8	4.0	5.2	6.3	7.6	9.9	12.3	14.7
3,000	.8	1.5	2.7	3.8	5.1	6.2	7.5	9.8	12.2	14.6

Note: To obtain approximate standard errors for persons of Hispanic origin, multiply the above standard errors by 1.4.

Appendix table 17—Standard errors of average annual earnings (68 chances out of 100)

Base of average number of farm workers (thousands)	Average annual earnings per person											
	100	250	500	750	1,000	2,000	3,000	4,000	5,000	6,000	7,000	9,000
	Dollars											
50	15	38	78	158	216	400	539	672	803	932	1,062	1,374
100	11	29	60	114	156	288	390	484	577	670	764	988
200	9	24	49	88	121	223	301	344	428	497	565	731
250	8	21	43	76	103	190	257	320	383	445	507	679
500	7	17	36	62	86	160	211	260	307	355	402	520
750	7	17	36	58	79	144	189	232	268	310	350	453
1,000	6	16	35	53	71	125	165	203	241	279	318	409
2,500	5	12	26	41	54	96	128	160	191	223	253	327
3,000	5	12	25	40	51	92	122	154	184	214	244	314

Note: To obtain approximate standard errors for persons of Hispanic origin, multiply the above standard errors by 1.4.

Standard Error of a Difference

For a difference between two sample estimates, the standard error is approximately equal to the square root of the sum of the squared standard errors of the estimates. The estimate can be of numbers, percentages, or averages. The method will represent the actual standard error quite accurately for the difference between two estimates of the same characteristics in two different areas, or for the difference between separate and uncorrelated characteristics in the same area. If, however, there is a high positive correlation between the two characteristics, the formula will overestimate the true standard error.

Illustration of the Computation of the Standard Error of a Difference

Appendix table 1 shows that almost 18 percent of farmworkers worked 250 days and over. The apparent difference between the workers who worked fewer than 25 days (37 percent) and those who worked 250 days or more is 19 percentage points.

Appendix table 15 shows, by interpolation, the standard error for 18 percent on a base of 2,522,000 to be approximately 1.7 percent (σ_x). The standard error for 37 percent is 2.1 percent (σ_y). To get the standard error of the estimated difference, formula (3) for the standard error of a difference is used follows:

$$\sigma_{(x-y)} = \sqrt{\sigma_x^2 + \sigma_y^2}. \qquad (3)$$

Therefore, the standard error of the estimated difference is

$$2.7 = \sqrt{(1.7)^2 + (2.1)^2}. \qquad (4)$$

This means the chances are 68 out of 100 that the estimated differences based on the sample would vary by 2.7 percentage points from the difference derived using complete census figures. Since the standard error of the estimated difference (2.7 percentage points) is less than the difference between the two estimates (19 percentage points), it can be concluded with 68-percent confidence that the percentage of hired farmworkers who worked fewer than 25 days in 1985 is greater than the percentage of workers who worked 250 days and over in 1985.

Appendix III: Definitions and Explanations

Hired Farmworkers: Persons 14 years and older in the civilian noninstitutional U.S. population at the time of the survey who did any farmwork for cash wages or salary at any time in the year, even if only for one day. Farmwork for cash wages or salary includes: (1) work done on any farm for cash wages or salary in connection with the producing, harvesting, threshing, preparing for market, or delivery to market of agricultural products; (2) work done off the farm for a farmer by farmworkers, such as trips to buy feed, seeds, or fertilizer, or to handle other matters involved in running the farm business; (3) repairs of farm buildings and machinery, for example, performed by a hired farmworker when done along with the type of work specified in (1) and (2) above; and (4) managing a farm enterprise for cash salary.

Not included as farmwork for cash wages or salary are: (1) work performed by farm operators on their own farm, or "exchange" work between farmers; (2) work done exclusively for "pay in kind"; (3) work done without pay on a farm (a small regular cash allowance is not considered farm wages, see definition of unpaid farmworker); (4) nonfarmwork performed on a farm, such as the building of a farm structure, drilling a well, hauling agricultural products to market by commercial truckers, or domestic service in the home of a farmer; and (5) custom work such as spraying, threshing, and combining when a person is paid a combined rate for the use of equipment and labor.

Farm Operators: Persons 14 years and older in the civilian noninstitutional population of the United States at the time of the survey who operated a farm, ranch, nursery, or other agricultural enterprise which they owned, rented, or leased at any time during the year. Thus, farm operators include: (1) farmers who own and work their own incorporated or unincorporated farms, (2) sharecroppers who do farmwork and receive a share of the crop or a share of the value of the crop, (3) tenant farmers who rent farmland from someone else and pay rent either in cash or shares of agricultural products, and (4) other persons who rent or lease land for the purpose of agricultural production. Farm property owners who lease or rent their land, but are not actively involved in the day-to-day operation of the farm, are not counted as farm operators. The number of farm operators includes all persons who said they operated a farm during the year. This number may be greater than the number of farms since there may be more than one farm operator per farm household.

Unpaid Farmworkers: Persons, other than farm operators, 14 years and older in the civilian noninstitutional population of the United States at the time of the survey who worked on a farm, ranch, or nursery without receiving cash wages or salary. Work done for a "token" cash allowance or work done for room and board or pay in kind if the worker does not receive cash wages or salary are defined as unpaid farmwork.

Work Classifications: Casual workers—persons who worked fewer than 25 days at farmwork during the calendar year. Seasonal workers—persons who worked 25–149 days. Regular workers—persons who worked 150–249 days. Year-round workers—persons who worked 250 days or more.

Days of Farmwork or Nonfarmwork: Days on which farmwork or nonfarmwork was reported. The work may have been for all or only part of a day.

Earnings from Farmwork and Nonfarmwork: Total cash wages or salary received for farmwork or for nonfarmwork. Estimates of earnings do not include the value of perquisites received in connection with farmwork nor the value of fringe benefits received in connection with nonfarmwork. Self-employment income from either farm or nonfarm businesses and profits from either farm or nonfarm businesses are not included in estimates of earnings.

Primary Employment Status During Year (termed "chief activity" in reports prior to 1976): Information on the primary employment status of hired farmworkers during the year was derived from the question, "What was _____ doing most of 1985—working, keeping house, going to school, or something else?" If the initial response was "working," the kind of work the person was doing most of the year was determined. "Hired farmwork" was recorded if most of a person's work was farmwork for cash wages or salary. "Operating a farm" was recorded if most of a person's working time was spent operating a farm (as an owner, tenant, or sharecropper). "Unpaid farmworker" was recorded if most of a person's working time was spent doing unpaid farmwork. "Nonfarmwork" was recorded if most of a person's working time was spent operating a nonfarm business, in a profession, working without pay in a nonfarm business, or working for wages or salary (or pay in kind) in any nonfarm activity (such as manufacturing, trade, construction, and domestic services). For the person who did not report "working" as the primary activity, information was obtained on what he or she was doing most of the year. "Looking for work" (unemployed) was reported for a person who spent most of the time without employment but was actively looking for a job. "Keeping house" was reported for a person who spent most of the time doing housework without pay. "Going to school" was reported for a person who spent most of the time during the year attending school. The category "other" was reported for a person who spent most of the time at some activity other than named above.

Major Crop or Livestock Activity: Information on crop or livestock activity of hired farmworkers and unpaid farmworkers was derived from the question, "What crop or livestock did _____ work with most on the farm where he or she worked the greatest number of days in 1985?" Information obtained from farm operators was based on the question: "What product contributed most to the gross value of sales on the farm which _____ operated?" Categories of response included grains, tobacco, cotton, other field crops, vegetables or melons, fruits or tree nuts, beef cattle, dairy, other livestock, horticultural specialty crops, and other.

Migratory Status: Migratory workers are hired farmworkers who (1) left their home temporarily overnight to do hired farmwork in a different county within the same State or in a different State with the expectation of eventually returning home, or (2) had no usual place of residence and did hired farmwork in two or more counties during the year. Nonmigratory hired farmworkers are those who (1) did all their hired farmwork for the year in the same county in which they lived, (2) made a permanent move from one county to another during the year (even if they did hired farmwork in both counties), or (3) commuted daily across the county or State line to work and returned home each night.

Age: Based on the person's age at last birthday.

Education Completed: Refers to the highest grade of school completed by the person. Questions on educational attainment apply only to progress in graded public, private, and parochial elementary and high schools, whether day schools or night schools. Thus, schooling is that which may advance a person toward an elementary school certificate; a high school diploma; or a college, university, or professional school degree. Schooling in other schools was counted only if the credits obtained were regarded as transferable to a school in the regular school system.

Racial/Ethnic Group: Refers to division of the population into three mutually exclusive groups—white, Hispanic, and black and other. "Ethnic origin" was determined for this report by asking respondents their origins or descent. The answer to this question may produce results somewhat different from results based on inferred ethnic identification using such characteristics as country of birth of the person or parents, language spoken in the home, or surname. "Hispanic" includes all Mexican, Mexicano, Puerto Rican, Cuban, Central or South American, or other Hispanic persons. "White" refers to white persons other than those of Hispanic origin. "Black and other" includes blacks and other groups such as Indians, Chinese, Japanese, and others not of Hispanic origin. For simplicity of presentation, these groups are termed white, Hispanic, and black and other.

Farm Production Region: The States included in each of the 10 farm production regions are as follows: Northeast—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont, New York, New Jersey, Pennsylvania, Maryland, and Delaware (the District of Columbia is included in the Northeast region); Lake States—Minnesota, Wisconsin, and Michigan; Corn Belt—Iowa, Missouri, Illinois, Indiana, and Ohio; Northern Plains—North Dakota, South Dakota, Nebraska, and Kansas; Appalachia—Virginia, West Virginia, Kentucky, Tennessee, and North Carolina; Southeast—South Carolina, Georgia, Alabama, and Florida; Delta States—Mississippi, Louisiana, and Arkansas; Southern Plains—Oklahoma and Texas; Mountain—Montana, Idaho, Wyoming, Nevada, Utah, Colorado, Arizona, and New Mexico; Pacific—Washington, Oregon, California, Hawaii, and Alaska.

*U.S. GOVERNMENT PRINTING OFFICE:1988-201-089:80112/ERS

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